

THE CHEMIST AND DRUGGIST

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AUGUST 21, 1909

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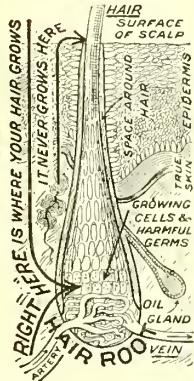
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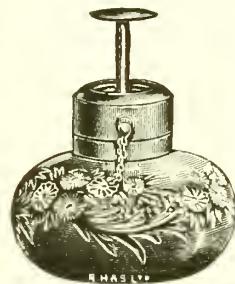
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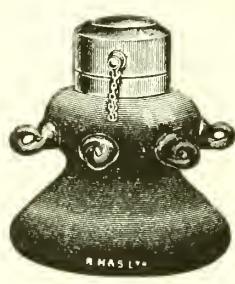
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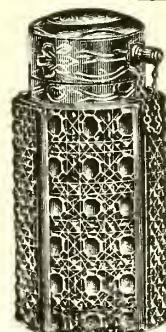
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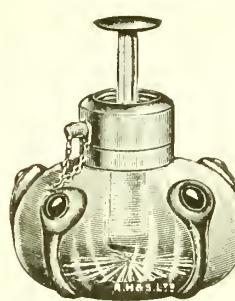
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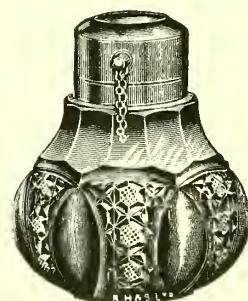
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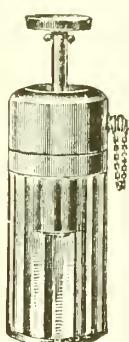
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Zimmermann, C., & Co.

CORKS

Mitchell, N. W., & Sons, Ltd.

CORN CURE

Edwards, S.

CORN FILE

Lindsey, T. C., & Co., Ltd.

COUNTER ADJUNCTS

Evans Sons Lescher & Webb, Ltd.

COUNTER SPECIALITIES

Allen & Hanburys, Ltd.
British Drug Houses, Ltd.
Hewlett, C. J., & Son

Newberry, F., & Sons, Ltd.

Southall Bros. & Barclay, Ltd.

Woolleys, Ltd.

CREAM OF TARTAR

British Drug Houses, Ltd.

CREOSOTE

Baiss Bros. & Stevenson, Ltd.

Burt, Boulton & Haywood

Morson, T., & Son

CREPE BANDAGE

Gimber, W., & Son

Norwich Crêpe Co. (1856), Ltd.

Wood, Vincent

CYANIDES

May & Baker, Ltd.

DAIRY SPECIALITIES

Benger's Food, Ltd.

Fullwood, R. J., & Bland

Oldfield, Pattinson & Co.

Tomlinson & Hayward, Ltd.

DEMIJOHNS

Brett, E., & Co., Ltd.

DENTAL INSTRUMENTS

Hatrick, James L., & Co., Ltd.

DENTAL MECHANICS

Chalk, George, & Co.

Fentiman, A. G.

Fentiman, A. J., & Co.

Halder, E. C.

Last & White.

Wardale & Co.

DENTIFRICES

Beecham, T.

Beiersdorf, P., & Co.

Bell, John, Hills & Lucas, Ltd.

Blackie, R.

Burroughs Wellcome & Co.

Calvert, F. C., & Co.

Christy, T., & Co.

Wardale & Co.

Wardale & Co.

Jewsbury & Brown

Lambert Pharmacal Co.

McKesson & Robbins

Maw, S., Son & Sons

Newberry, F., & Sons, Ltd.

Odol Chemical Works

Standard Tablet & Pill Co.

Woods, W., & Son

Woolley, J., Sons & Co., Ltd.

Woolley, J.,

EFFERVESCENT PREPS.

(continued)—

Evans Sons Lescher & Webb, Ltd.
Goodall, Backhouse & Co.
Kutnow, S., & Co., Ltd.
Lloyd, T. Howard, & Co.
Lorimer & Co., Ltd.
Newhall & Mason
Potter & Clarke
Standard Tablet & Pill Co.
Strange, John & E.
Tidman & Son, Ltd.
Tyner, T., & Co., Ltd.
Wright, Layman & Umney

ELASTIC HOSIERY

Ayrton, Saunders & Co., Ltd.
Berliner, Arthur
Burge, Warren & Ridgley, Ltd.
Haywood, J. H.
Maw, S., Son & Sons
Wood, Vincent

EMERY AND CLOTH

Oakey, J., & Sons, Ltd.
EMULSIONS, COD - LIVER OIL, ETC.
Allen & Hanburys, Ltd.
Ayrton, Saunders & Co.
Baiss Bros. & Stevenson, Ltd.
Blackie, Robert
British Drug Houses, Ltd.
Evans Sons Lescher & Webb, Ltd.
Faulding, F. H., & Co.
Harker, Stagg & Morgan, Ltd.
Lorimer & Co., Ltd.
Oldfield, Pattinson & Co.
Scott & Bowne, Ltd.
Parke, Davis & Co.
Woolley, Jas., Sons & Co.
Woolleys, Ltd.

ENEMAS

Bailey, W. H., & Son
Brige, Warren & Ridgley
Davol Rubber Co.
Hattrick, James L., & Co., Ltd.
Hay, J. B., & Co.
Ingram, J. G., & Son
Maw, S., Son & Sons
Toogood, W., Ltd.
Warne, W., & Co., Ltd.

ENTOMOLOGICAL APPARATUS

Watkins & Doncaster

EPSOM SALTS

Howards & Sons, Ltd.

ESSENCES, CONCRETE

Lautier Fils
Murray, O., & Co., Ltd.
Roure-Bertrand fils
Schmoller & Bompard
ESSENCES, SOL. AND FRUIT
Alliance Drug & Chem. Co.
Baiss Bros. & Stevenson, Ltd.
Barnett & Foster
Boake (A.), Roberts & Co., Ltd.
Bush, W. J., & Co., Ltd.
Evans Sons Lescher & Webb
Hay, Wm., Ltd.
Lautier Fils
London Essence Co.
Lorimer & Co., Ltd.
Newball & Mason
Roure-Bertrand fils
Spencer, J., Son & Co.
Stevenson & Howell, Ltd.
Zimmermann, A. & M.

ETHERS

Baiss Bros. & Stevenson, Ltd.
Macfarlan, J. F., & Co.
May & Baker, Ltd.
Tyner, T., & Co., Ltd.
White, A., & Sons

EUCA LYPTUS OIL

British Drug Houses, Ltd.
Baiss Bros. & Stevenson, Ltd.

EXTRACT OF HERBS

Newball & Mason
Potter & Clarke

EXTRACTS (MEDICINAL)

Allen, Stafford, & Sons, Ltd.
Chemists' Co-operative Wholesale
Hewlett, C. J., & Son
Parke, Davis & Co.
Ransom, W., & Son
(See also WHOLESALE DRUGGISTS)

FEEDING BOTTLES

Brett, E., & Co., Ltd.
Fecher, M. J.
Hovenden, R., & Sons, Ltd.
Kilner Bros., Ltd.
Maw, S., Son & Sons
Sangers'
Southall Bros. & Barclay, Ltd.

FILTERS (WATER)

Berkfeld Filter Co., Ltd.

FRESH GLOVES

Sangers'
FLYCATCHERS
Alabastine Co. (British), Ltd.
Deansmere Manfg. Co.
Flykatcho
Ford, Shapland & Co.
Frowein, C.
Kay Bros., Ltd.
Smith, J. H., & Co.
Strong, Christy
Tunbridge & Wright

FOODS, INFANTS'

Allen & Hanburys, Ltd.
Benger's Food, Ltd.
Frame Food Co., Ltd.
Loftthouse & Saltmer
Natural Food Co., Ltd.
Willows, Francis, B & T.

FORMALDEHYDE

Kurt, Boulton & Haywood
FOODS, SPECIAL
Allen & Hanburys, Ltd.
Benger's Food, Ltd.
Brand & Co., Ltd.
Burt, C. J.
Buvo, Ltd.
Callard & Co.
Fairchild Bros. & Foster
Frame Food Co., Ltd.
Menley & James, Ltd.
Natural Food Co., Ltd.
Wander, A.

FRUIT CRYSTALS

Aerators, Ltd.
FRUIT SYRUPS
Idris & Co., Ltd.

FULLER'S EARTH

Mumford, G. S., & Sons

FUMIGATORS

Sanitas Co., Ltd.

GELATIN AND GLUE

Boehm, F., Ltd.

GLAUBER'S SALT

Bramwell, E., & Son

Howards & Sons, Ltd.

GLYCERIN

Boehm, F., Ltd.

Price's Patent Candle Co.

GLYCEROPHOSPHATES

Pointet & Girard

GOLD PAINT

Judson, D., & Son

GRINDERSAllen, Stafford, & Sons, Ltd.
Goodall, Backhouse & Co.

Willows, Francis B. & T.

HAIR WAVERS AND CURLERS

Merkham Trading Co., Ltd.

HAIR PREPARATIONS

Capsuloids (1909), Ltd.

Cheserrough Manfg. Co.

Edwards' "Harlene" Co.

Harker, Stagg & Morgan

Herpicide Co.

John Strange Winter

Martiné & Co.

Robare's Anreoline

Rowland, A., & Sons

Woolleys, Ltd.

HAT DYES

Whitaker & Co.

HAT RENOVATORS

Christy, T., & Co.

HEATING FLASKS

Gutmann, A. E., & Co.

HERBS

Potter & Clarke

HOMOEOPATHIC MEDICINES

Ashton & Parsons, Ltd.

Keene & Ashwell, Ltd.

Leath & Ross

HOTELS

Esmond Hotel

Kingsley Hotel

Thackeray Hotel

HOT-WATER BOTTLES

Berliner, Arthur

Burge, Warren & Ridgley

Fulham Pottery & Cheavin

Filter Co., Ltd.

Hutchinson Co.

Sanitas Co., Ltd.

Tyner, T., & Co., Ltd.

HYDROGEN PEROXIDE

May & Baker, Ltd.

Sanitas Co., Ltd.

Tyner, T., & Co., Ltd.

HYPOPHOSPHITES

May & Baker, Ltd.

Tyner, T., & Co., Ltd.

INHALERS

Christy, T., & Co.

Fecher, M. J.

Sangers'

INK

Bewley & Draper, Ltd.

Hickisson, A. B.

INSECTICIDES

Christy, Thos., & Co.

Smith, B. A., & Co.

Tomlinson & Hayward, Ltd.

Voss, Walter, & Co.

White, E. A., Ltd.

Woolleys, Ltd.

INSECT POWDER

Boehm, F., Ltd.

Smith, B. A., & Co.

IODINE AND IODIDES

Howards & Sons, Ltd.

Morson, T., & Son

ITROSYL

Fletcher, Fletcher & Co.

JARS AND POTS

Boling, Brown & Co.

Brett, E., & Co., Ltd.

Bush, H. W., & Co., Ltd.

Cook, A., & Co.

Johnsen & Jorgensen, Ltd.

Kilner Bros., Ltd.

Lang, Jules, & Son

Maw, S., Son & Sons

Poths, H., & Co.

Reuter, R. J.

Stipendum Stopper Co.

Toogood, W., Ltd.

LACTIC FERMENTS

Allen & Hanburys, Ltd.

Cox, Arthur H., & Co., Ltd.

Davies, Sons, & Co.

Martindale, W.

Parke, Davis & Co.

Wilcox, Jozear & Co.

LAMPS, DISINFECTION

Roberts, Cornford & Co.

LANOLINE

Burroughs Wellcome & Co.

Christy, T., & Co.

Sangers'

LARD

Chemists' Co-operative Wholesale

Ewen, J., & Sons

LIME JUICE AND CORDIAL

Evans Sons Lescher & Webb

Goodall, Backhouse & Co.

Idris & Co., Ltd.

LINSEED, CRUSHED, ETC.

Allen, Stafford, & Sons

Mumford, G. S., & Sons

LINTS

Vernon & Co., Ltd.

LIQUORICE JUICE

Boehm, F., Ltd.

British Drug Houses, Ltd.

Evans Sons Lescher & Webb, Ltd.

Horner & Sons

Jackson, E. E.

Mumford, G. S., & Sons

LIQUORS, CONC., ETC.

Allen, Stafford, & Sons, Ltd.

Fletcher, Fletcher & Co.

Hewlett, C. J., & Son

Robinson, B., & Co.

LITHIA SALTS

British Drug Houses, Ltd.

May & Baker, Ltd.

Merck, E.

LOZENGES

Allen & Hanburys, Ltd.

Cox, A. H., & Co., Ltd.

Denoual, J., & Co.

Jackson, E. E.

Meggeson & Co., Ltd.

Potter & Clarke

Raimes & Co

Warrick Bros.

MACHINERY, PHARMACAL

Allen & Hanburys, Ltd.

Bennett, E., & Son, Ltd.

Bennett, Sons & Shears, Ltd.

Fecher, M. J.

Gardner, Wm., & Sons, Ltd.

Pindar, J. W., & Co.

Smith, B. A., & Co.

Stokes, F. J., Machine Co.

Thompson & Capper (Stokes)

Wilkinson, S. W., & Co.

MAGNESIA AND ITS SALTS

Henry, T. & W.

Howards & Sons, Ltd.

May & Baker, Ltd.

Washington Chemical Co.

MAILING CASES

May, Roberts & Co.

MALT EXTRACT AND PREPS.

Allen & Hanburys, Ltd.

Baiss Bros. & Stevenson, Ltd.

Blackie, R.

Burroughs Wellcome & Co.

Evans Sons Lescher & Webb

Hewlett, C. J., & Son

Lorimer & Co., Ltd.

Oppenheimer, Son & Co., Ltd.

Paine & Co., Ltd.

Southall Bros. & Barclay, Ltd.

Squire & Sons

Woolley, Jas., Sons & Co., Ltd.

Wright, Layman & Umney

MARKING INK

Hickisson, A. (Bond's)

MEASURFS

Bush, H. W., & Co., Ltd.

MEAT EXTRACTS

Armour & Co., Ltd.

Brand & Co., Ltd.

Buvo, Ltd.

MEDICINE CHESTS

Burroughs Wellcome & Co.

Keene & Ashwell, Ltd.

Leath & Ross

Lloyd, T. Howard, & Co.

Parke, Davis & Co.

MENTHOL CONES

Bush, H. W., & Co., Ltd.

Maw, S., Son & Sons

MERCURIALS

Howards & Sons, Ltd.

May & Baker, Ltd.

Merck, E.

Tyner, T., & Co., Ltd.

METEOROLOGICAL SETS

Darton, F., & Co.

METHYLATED SPIRIT

Burrough, J., Ltd.

Preston's Liverpool Distillery

Randall & Son, Ltd.

MILK APPARATUS

Zimmermann, C., & Co.

MINERAL WATERS AND SALTS

Apollinaris Co., Ltd.

British Drug Houses, Ltd.

Hughes, E. Griffiths

Ingram & Royle, Ltd.

Vichy (State Springs)

MOTOR GOGGLES

Darton, F., & Co.

NAPHTHAS

Burt, Bolton & Haywood

NURSES' WALLETS

Herrick, James L., & Co., Ltd.

OILS, ESSENTIAL

Allen, Stafford, & Sons, Ltd.

Alliance Drug & Chem. Co.

Baiss Bros. & Stevenson

Boake (A.), Roberts & Co., Ltd.

Bush, W. J., & Co., Ltd.

Chiris, Antoine

Evans Sons Lescher & Webb, Ltd.

Horner & Sons

Lautier Fils

Lhermine & Cie.

London Essence Co.

Matthew, Jesse

Mühlethaler, Th., Ltd.

Pasquale, S. F. de, & Fratelli

Poppelreuter, W.

Ransom, W., & Son

Ronre-Bertrand fils

Sachse, E., & Co.

Scheller, Emil, & Co.

Schimmel & Co.

Schmoller & Bompard

Spencer, J., Son & Co.

Stevenson & Howell, Ltd.

Todd, A. M., Co.

Wright, Layman & Umney

Zimmermann, A. & M.

OILS, FATTY, ETC.

Allen, Stafford, & Sons, Ltd.

Price's Patent Candle Co.

Smith, B. A., & Co.

OPTICAL GOODS

Botwright & Grey
Darton, F., & Co.
Maw, S., Son & Sons
Newberry, F., & Sons, Ltd.
Nitsche & Günther
Raphael's, Ltd.
Richardson, S. (Hardy & Co.)

OPTICAL INSTRUCTION

British Optical Institute

OTTO OF ROSE

Bontcheff & Kidoff
Pappazoglou, D.
Reitmeyer & Co. (synthetic)
Scheller, Emil & Co.
Seraphinoff, S., & Co.
Shipkoff & Co.

PACKED GOODS

(See WHOLESALE)

PALATINOIDS

Oppenheimer, Son & Co

PASTILLES

Allen & Hanburys, Ltd.
Asche, C. F., & Co.
Baiss Bros. & Stevenson
Burroughs Wellcome & Co.
Denoual, J., & Co.
Evans Sons Lescher & Webb
Meggeson & Co., Ltd.
Warrick Bros.

PATTERN AGENT

Barker, R. W.

PERFUMES

Allen & Hanburys, Ltd.
Barclay & Sons, Ltd.
Breidenbach & Co.
Bronnley, H., & Co., Ltd.
Bush, W. J., & Co., Ltd.
Christy, T., & Co.
Chuit, Naef & Co.
Erasmic Co., Ltd.
Evans Sons Lescher & Webb, Ltd.
Hewlett, O. J., & Son
Hovenden, R., & Sons, Ltd.
John Strange Winter.
Lescol Perfumery Co.
McCracken, J. & R.
Maw, S., Son & Sons
Newberry, F., & Sons, Ltd.
Quelch, H. C., & Co.
Scheller Emil & Co.
Southall Bros. & Barclay
Spencer, J., Son & Co.
To-Kalon Mfg. Co.
Warrick Bros.
West, T., & Son
Yardley & Co., Ltd.

PERFUME MATERIALS

Bush, W. J., & Co., Ltd.
Bontcheff & Kidoff
Chiris, Antoine
Compagnie Morana
Flora Chemical Works, Ltd.
Lautier Fils
Mühlethaler, Th., Ltd.
Murray, O., & Co., Ltd.
Schimmel & Co.
Shipkoff & Co.
Spencer, J., Son & Co.
Zimmermann, U., & Co.

PESSARIES

Burge, Warren & Ridgley
Rendell, W. J.

PETROLEUM EMULSION

British Drug Houses, Ltd.

PETROLEUM JELLY

Chesbrough Mfg. Co.

PHOTO. CHEMICALS

Boehringer, C. F., & Soehne
Burroughs Wellcome & Co.
Lockyer, J. E.
Merek, E.

**PHOTO. ENLARGERS,
PRINTERS, &c.**

Express Developing Co.
Halifax Photographic Co.

PHOTO. GOODS

Barclay & Soas, Ltd.
Darton, F., & Co.
Evans Sons Lescher & Webb
Halifax Photographic Co.
Ilford, Ltd.
Lennon, Ltd.
May, Roberts & Co.
Murdoch, John, & Co.
Newberry, F., & Sons, Ltd.

PILL MAKERS

Allen & Hanburys, Ltd.

Asche, C. F., & Co.

Bishop, Alfred, Ltd.

British Drug Houses, Ltd.

Cox, A. H., & Co., Ltd.

PILL MAKERS (continued)—

Davies, Sons & Co.
Evans Sons Lescher & Webb, Ltd.
Hewlett, C. J., & Son
Howards & Sons, Ltd.
Lloyd, T. Howard, & Co.
McKesson & Robbins
Parke, Davis & Co.
Southall Bros. & Barclay
Standard Tablet & Pill Co.
Wand Mfg. Co.
Warner, W. R., & Co.
Woolley, J., Sons & Co., Ltd.

PLASTERS

Allcock Mfg. Co.
Berliner, Arthur
Beiersdorf, P., & Co.
Dalmas, A. de St., & Co.
Leslies, Ltd.
Maw, S. Son & Sons
Solport Bros.

PLASTIC MODELS

Plastic Advertisement Co.

POLISHES (VARIOUS)

Bradley & Bourdas
Judson, Daniel, & Son
Oakey, J., & Son, Ltd.

POSTERS

Ford, Shapland & Co.

PRINTERS

Dudley & Co.
Ford, Shapland & Co.
Harrison & Waide
Smith, W. H., & Son
Townsend, J., & Sons

PROPRIETARY ARTICLES

American Drug Stores
Anglo-American Drug Co.
Ashton & Parsons, Ltd.
Atkinson & Barker
Barclay & Sons, Ltd.
Battle, Son & Maltby
Beecham, T.
Beiersdorf, P., & Co.
Box, W. H.
British Drug Houses, Ltd.
Capsuloids (1909), Ltd.
Christy, T., & Co.
Coleman & Co., Ltd.
Congreve, G. T.
Cox, A. H., & Co., Ltd.
Curry, Henry
Daggett & Ramsdell
Daisy, Ltd.
Davenport, J. T., Ltd.
Day & Sons (Crewe), Ltd.
Day, Son & Hewitt
Denoual, J., & Co.
Edwards, W., & Son
Elliman, Sons & Co.
Evans Sons Lescher & Webb
Faulding, F. H., & Co.
Fellowes' Syrup
Fennings, Alfred
Ferris & Co.
Fulford, C. E., Ltd.
Goodall, Backhouse & Co.
Grapelax, Ltd.
Gay's Tonic Co.
Henry, T. & W.
Hinröd Asthma Cure
Hovenden, R., & Sons, Ltd.
Hughes, E. Griffiths
Ichthyol Co.
International Chemical Co.
Iron-Ox Rem. Co., Ltd.
Kay Bros., Ltd.
Kntawo, S., & Co., Ltd.
Lalor's, Dr., Phospodhyate
Lambert Pharmacal Co.
Lofthouse & Saltmer
Lorimer & Co., Ltd.
May, Roberts & Co.
Menley & James, Ltd.
Newberry, F., & Sons, Ltd.
Odol Chemical Works
Owbridge, W. T., Ltd.
Pedezo Co.
Pinoza

Powell, Thomas, Ltd.

Resinol Chemical Co.

Sangers'

Savarcesse's Capsules (Evans)

Schimmel & Co.

Scott & Bowne, Ltd.

Squire & Sons

Standard Tablet & Pill Co.

Stedman's Teething Powders

Thompson & Capper

To-Kalon Mfg. Co.

Tunbridge & Wright

Wilcox, Jozéau & Co.

Zotos, Ltd.

(See also DENTIFICES and TOILET ARTICLES)

PULVELLÆ

Warrick Bros.

PULVERETTES

Oppenheimer, Son & Co., Ltd.

PUMPS

Berkfeld Filter Co., Ltd.

QUININE AND SALTS

Boehringer, C. F., & Soehne

Howards & Sons, Ltd.

Pointet & Girard.

RAPE OILS

Hull Oil Mfg. Co.

RAZORS

Auto-Strop Safety Razor Co.

Gillette Safety Razor, Ltd.

Hovenden, R., & Sons, Ltd.

RENNET

Fullwood, R. J., & Bland

Oldfield, Pattinson & Co.

RESINS AND RESINOIDS

Allen, S., & Sons, Ltd.

Allen & Hanburys, Ltd.

Morson, T., & Son

Ransom, W., & Soa

Smith, T. & H., Ltd.

RESPIRATORS

Zimmer & Co.

RUBBER GOODS

Davol Rubber Co.

Burge, Warren & Ridgley, Ltd.

Evans Sons Lescher & Webb, Ltd.

Fecher, M. J.

Galen Mfg. Co.

Hatrick, James L., & Co., Ltd.

Haywood, J. H.

Hovenden, R., & Sons, Ltd.

Hutchinson Co.

Maw, S., Son & Soas

May, Roberts & Co

Waaklyn, H. A.

Warne, W., & Co., Ltd.

SACCHARIN

Saccharin Corporation, Ltd.

SALICIN

Macfarlan, J. F., & Co.

Smith, T. & H., Ltd.

SALICYLATES

Bayer Co., Ltd.

SAMPLE CASES

Keane, Thomas

SANTONIN

Smith, B. A., & Co.

SAPONIN

Field, C. W.

Sthamer, Dr. R.

SAUCES

Goodall, Backhouse & Co.

SCALE PREPARATIONS

Morson, T., & Son

SEA SALT

Tidman & Son, Ltd.

SEA-SICKNESS REMEDY

Zotos, Ltd.

SELTZOGENES

Advertisers, Ltd.

SERUMS AND ANTITOXINS

Allen & Hanburys, Ltd.

Evans Sons Lescher & Webb

Parke, Davis & Co.

Schimmel & Co.

Wilcox, Jozéau & Co.

SHARES

McAdam & Tuckniss

SHEEP-DIPS

Burt, Boulton & Haywood

Sanitas Co., Ltd.

Tomlinson & Hayward, Ltd.

SHOP-FITTING

Ayrton-Graham, Ltd.

Bowling & Son

Evans Sons Lescher & Webb, Ltd.

Josephs, P., & Son

Maw, S., Son & Sons

Mills, H.

Parnall & Sons, Ltd.

Rudduck & Co.

Sangers'

Southall Bros. & Barelay, Ltd.

Chiris, Antoine

Flora Chemical Works, Ltd.

SOAP MATERIALS

Allen & Hanburys, Ltd.

Armour & Co., Ltd.

Breidenbach & Co.

Bronnley, H., & Co., Ltd.

Dalmas, A. de St., & Co.

Galen Mfg. Co., Ltd.

Gimber, W., & Son

Hatrick, James L., & Co., Ltd.

Haynes, G., & Co.

Leslies, Ltd.

Liverpool Lint Co.

Macfarlan, J. F., & Co.

Maw, S., Son & Sons

Newsome, C.

Robinson & Sons, Ltd.

Southall Bros. & Barelay

Stuart Plaster Pad Co.

Vernon & Co., Ltd.

Wood, Vincent

Woolley, J., Sons & Co., Ltd.

Wright, Turner & Son, Ltd.

SOAPS, MEDICATED

Armour & Co., Ltd.

Bronnley, H., & Co., Ltd.

Calvert, F. C., & Co.

Faulding, F. H., & Co.

Lambert Pharmacal Co.

Wright, Layman & Umney

SOCKS

Dr. Nelson's Medicated Loofite

SODA FOUNTAINS

British Automatic Aerators, Ltd.

SODIUM BICARBONATE

Brunner, Mond & Co., Ltd.

Howards & Sons, Ltd.

Mumford, G. S.

SOYA OIL

Hull Oil Mfg. Co.

SPARKLETS

Aerators, Ltd.

SPECTACLES

Botwright & Grey

Darton, F., & Co.

Maw, S., Son & Sons

Nitsche & Günther

Raphael's, Ltd.

SPHYGMOMETERS

Hicks, J. J.

SPRIT OF WINE

Burrough, J., Ltd.

Preston's Liverpool Distillery

SPITTING-FLASKS

Maw, S., Son & Sons

SPONGE BAGS

Maw, S., Son & Sons

Schutze, F., & Co.

Toogood, W., Ltd.

SPONGE STANDS

Wanklyn, H. A.

SPONGES, RUBBER

Wanklyn, H. A.

SPONGIO-PILINE

Whitehead, R. R., & Bros.

SPRAYERS

White, E. A., Ltd.

SPRAYS

Burge, Warren & Ridgley, Ltd.

Cook, Alfred, & Co.

Davol Rubber Co.

Hovenden, R., & Sons, Ltd.

Maw, S., Son & Sons

May, Roberts & Co.

Newberry, F., & Sons, Ltd.

Parke, Davis & Co.

STARCH

Mumford, G. S., & Sons

STILLS, ESSENTIAL OIL

Bennett, Sons, & Shears, Ltd.

STOPPERS

Fletcher, Fletcher & Co.

Stipendum Stopper Co.

STOVES (HEATING)

Clark, S., & Co.

SUPPOSITORIES

Cox, Arthur H., & Co.

SURGICAL APPLIANCES

Allen & Hanburys, Ltd.

Bailey, W. H., & Son

Bronnley, H., & Co., Ltd.

Hatrick, James L., & Co., Ltd.

Maw, S., Son & Sons

Quelch, H. C., & Co.

Wood, Vincent

SURGICAL D

SYNTHETIC REMEDIES

Bayer Co., Ltd.
Boehringer, C. F., & Soehne
Boehringer, C. H., Sohn
Hoffmann-La Roche, Ltd.
Reitmeyer & Co.

SYNTHETIC PERFUMES

Boehringer, C. F., & Soehne
Bush, W. J., & Co., Ltd.
Chuit, Naef & Co.
Compagnie Morana
Flora Chemical Works, Ltd.
Murray, O., & Co., Ltd.
Reitmeyer & Co.

SYPHONS, S. W.

Aerators, Ltd.
Barnett & Foster
Brefit, E., & Co. Ltd.
Camwal, Ltd.
Idris & Co., Ltd.

SYRUPS, MEDICINAL

Chemists' Co-operative Wholesale
Fellows' Med. Mfg. Co.
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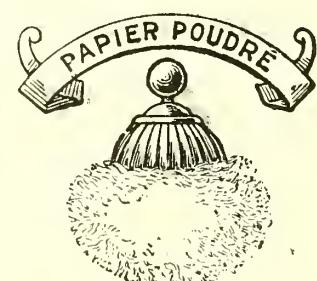
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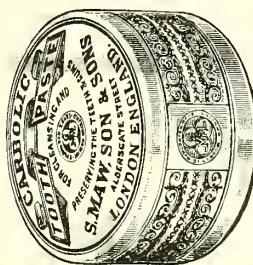
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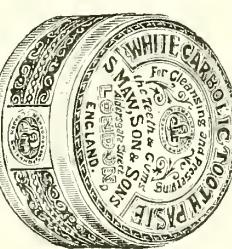
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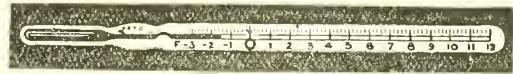
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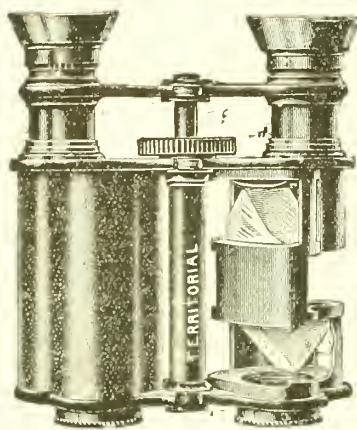
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Imperial International Exhibition, Shepherd's Bush: we are exhibiting at our Pavilion opposite the Flip-Flap, where we shall be pleased to demonstrate any of our Registers to anyone who favours us with a visit.

BRANCH OFFICES IN EVERY TOWN.

A GOOD LINE.

HAMMOND'S (antiseptic) CLEANSING PASTE
removes Tobacco Stains from the Fingers.

Also PAINT, OIL, FRUIT, and INK STAINS.

Leaves the hands Clean, Soft, and Smooth.
Sold in tins 1/- each. 1/- per dozen carriage paid.

THE HAMMOND MANUFACTURING CO.
30 St. Andrew Square, EDINBURGH.

ESTAB. 1871.

CONTRACTORS TO WAR OFFICE, ETC.

CORKS FOR CHEMISTS.

We are the ONLY CORK FIRM
that makes a speciality of

RETAIL CHEMISTS' CORKS.

FINEST QUALITY SELECTED BOTTLE & PHIAL CORKS AT
LOWEST PRICES EVER OFFERED.

WRITE FOR FREE SAMPLES & PRICE LIST.

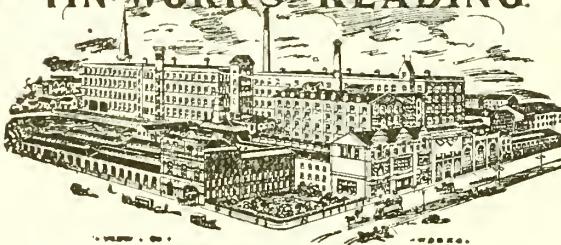
N.W. Mitchell & Sons, Ltd.

BOUCHON WKS, 15-17 FARRANCE ST., LIMEHOUSE, LONDON.

HUNTLEY, BOORNE & STEVENS, LTD.

**COLOR
PRINTERS
ON TIN.**

TIN WORKS READING.



MAKERS OF HIGH-CLASS.
DECORATED & PLAIN TIN BOXES,
& SPECIALTIES FOR CHEMISTS

Quotations to samples
or descriptions.
CORRESPONDENCE INVITED.

Telegrams
"unworks Reading" National Telephone 29

FORD, SHAPLAND & CO.

Chemists' and General Printers,
6 GREAT TURNSTILE, HIGH HOLBORN, LONDON, W.C.

Telephone No. 65 City.

SWIFT FLY BAND

The Cleanest & Most Effective. Specially suitable for Export.
6/- per gross.

The "SWALLOW" STICKY FLY PAPER.

5/- per gross.

ILLUSTRATED COUNTER BILLS. CABINET PAPER.
FOLDING CARDBOARD BOXES. TOILET ROLLS.
POSTERS. SHOWCARDS. WINDOW BILLS.

Labels (of every description), Price Lists, Pamphlets,
Circulars, Billheads, Cards, Memorandums, Pre-
scription Envelopes, and all kinds of PRINTING and
Stationery required by Chemists, at most moderate Prices.

LENS MEASURE FOR MEASURING Spherical and Cylindrical Lenses.

Price 17/6 each post free.

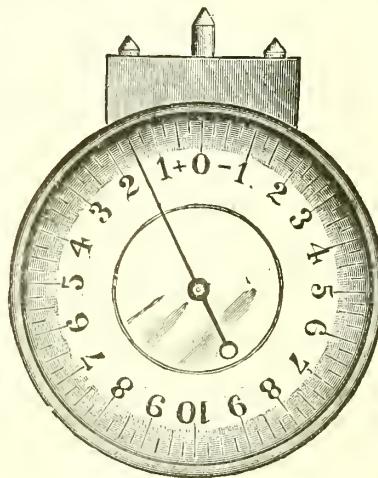


Illustration shows instrument exact size.

Manufactured and Sold by—

BOTWRIGHT & GREY,
Spectacle and Eyeglass Makers,
13 & 14 Spencer Street, Clerkenwell,
LONDON, E.C.

A bold display of Euthymol Preparations is sure to bring the best class custom of an entire district.

¶ To assist in promoting retail sales we have prepared a registered series of display-card talks on Euthymol products, suitable for window or counter.

¶ The style of these cards is distinctive and high-class. They are good enough to show anywhere, and are interesting enough to attract business.

¶ Ask for these cards to be included with your next order; they will assist you to sell Euthymol, and be an added attraction to your display shelves.

PARKE, DAVIS & CO., Beak Street, LONDON, W.

The Aphid INVASION.

BY USING "ABOL" SUPERIOR INSECTICIDE, The Best Plant Wash for garden and greenhouse.

AND "ABOL" Syringe. THE PERFECT SPRAYER.

PRICES: 8/-, 10/-, 14/-
By post 4d. extra.

GARDEN LOVERS CAN EASILY & CHEAPLY SECURE PROTECTION KILLS APHIS, MILDEW, CATERPILLARS, &c. MAKES PLANTS HEALTHY. INVALUABLE TO ROSE GROWERS. NON-POISONOUS.

½-Pints, 1/-; Pints, 1 ½; Qts., 2 ½; ½-Galls., 4/-; Galls., 7 ½.
Unsolicited opinions: "Grand success." "Finest on the market." "A perfect syringe." "More than satisfied." "Delighted." And 100's of others.

TRADE MARK REGD. May be had through all Seedsmen, Florists, Chemists and Ironmongers. Full particulars post free from the Sole Proprietors and Manufacturers—
E. A. WHITE, Ltd., Hop & Fruit Growers, PADDOCK WOOD, KENT.

The 'VAMPIRE' and the 'FLYSAC.'

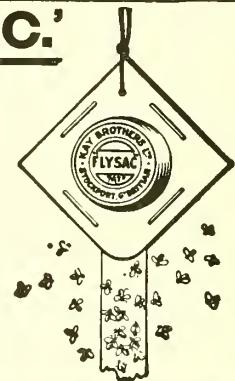
Send for samples. They carry our argument. Both annihilate flies, and both are hermetically sealed. With them there is no leakage, no risk, and no delay. The "VAMPIRE" sells on account of the novelty of its construction, the "FLYSAC" on account of its economy in use.

Prompt Deliveries. Big Profits. Quick Returns.

SOLE MAKERS:

KAY BROS. Ltd., STOCKPORT.

30 years' experience in the manufacture of Bird-limes and Flygums.



THE "SILVER" LIXOL FLY CATCHERS.

(Patent and Registered).



The Latest and Best.

Send for Samples.

They Will Convince You.

A Neat and Handy Contrivance.

Easy to Open.

Pull the String,
That's All!



Order through your Wholesaler—if he doesn't stock, send us a postcard and we will arrange.

Sole Makers: DEANSMERE MANUFACTURING CO.,
Works: HIGH STREET, STOCKPORT, England.

TUNBRIDGE & WRIGHT'S FLY CEMETERY.



The ORIGINAL and by far the BEST Sticky Fly Paper in the market.

Gives a Profit of 140 per cent.

WE HAVE REDUCED
THE PRICE TO 5/- PER
GROSS NET CASH
WITH ORDER AND
CARRIAGE PAID

TUNBRIDGE & WRIGHT'S CEMETERY FLY TAPE.

To meet the demand for a Fly Tape (which under some conditions is more convenient than a Fly Paper), we have produced the Cemetery Fly Tape, which is strongly made and most efficacious.

6/6 per gross net cash with order,
carriage paid.

MANUFACTURERS:

**TUNBRIDGE & WRIGHT,
READING.**

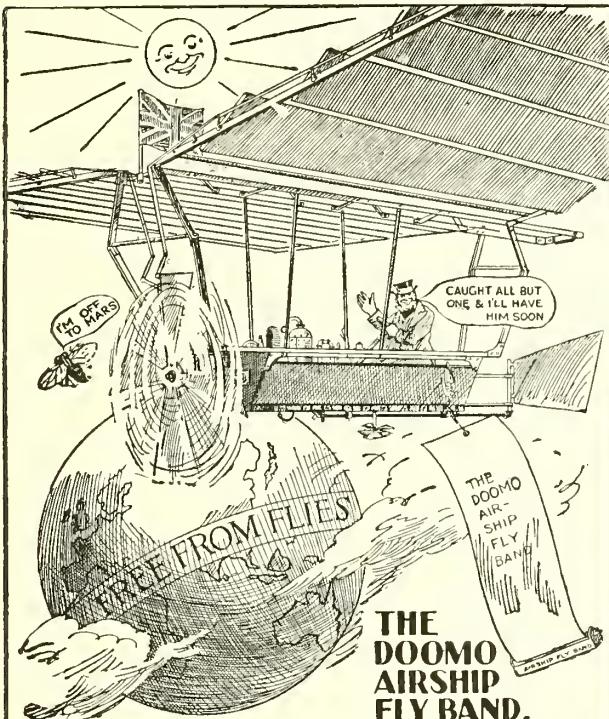
London Depot: 12 LITTLE BRITAIN, E.G.

North of England Depot:

4 GALLOWGATE, NEWCASTLE-ON-TYNE.

Telegrams—"FLIES READING." Telephone—496 READING.





Jno. H. Smith & Co.
Proprietors of FLYODOOMO DOOMOTAPE, &c.
TELEGRAMS "SMITH-CHEMIST" NEWARK.

TANGLEFOOT SEALED STICKY FLY PAPER.

Send us
5/-
we send you
our parcel
post
packet of
150 sheets.

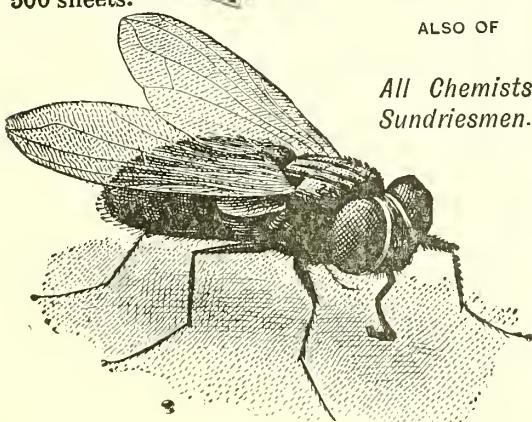
Send us
15/-
and 1/- for
carriage,
we send you
a case of
500 sheets.



ALABASTINE CO.
British
LIMITED,
Church Street,
South Lambeth,
LONDON, S.W.

ALSO OF

All Chemists'
Sundriesmen.



FLYODOOMO

sticks to its reputation,
and flies keep up their
reputation of sticking to

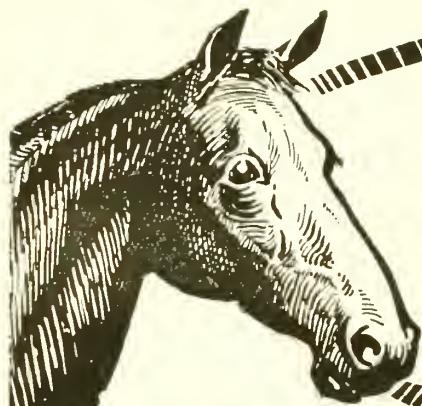
FLYODOOMO

Per Gross **5/-** Carriage Paid.

*The old favourite.
Always good stock.*

JNO. H. SMITH & CO.
Doomo Works,
NEWARK-ON-TRENT.





**IT PAYS
TO STOCK AND PUSH
HARVEY'S
GREAT REMEDIES
FOR THE HORSE.**

Now on the P.A.T.A.
GENEROUS PROTECTED PROFITS.



HORSE BALLS

Celatine or Transparent coated, Oval or Oblong.

Alterative, Cough, Cordial, Fever, Grease, Tonic and Diuretic. **1/6** per dozen net, in boxes of 3, 6, or 12.

PHYSIC BALLS from **1/6** to **2/9** doz.

THE WAND MANUFACTURING CO.

21 WELLINGTON ST., LEICESTER.

NAT. TEL. 1145. TEL. ADDRESS: "QUERCUS."

DAY, SON & HEWITT'S Animal Medicines.

A sure remedy for the Fret, Colic or Gripes, Influenza, Loss of Appetite in Horses. For Debility, Scour, or Diarrhoea in Horses, Cattle, and Sheep. Hoven or Blown Cattle and Sheep instantaneously relieved.

Price 1s. 9d. per bot.; 20s. per doz.



For all Feverish Disorders among Cattle, Sheep, and Pigs, and for Colds, Indigestion, Costiveness, Yellows, Surfeits, Loss of Cud, Hide-bound, Red Water, &c. Admirably adapted for cleansing and checking Feverish Symptoms in Cows and Ewes after Parturition.

Price (Cows), 13s. per doz.; Ewes, 3s. 6d.

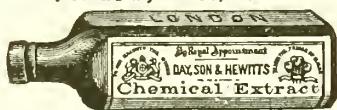
For Kicks, Cuts, Bruises, Sore Withers, Swellings, Strains of Ligaments and Tendons, Saddle Galls, &c. It rapidly relieves Straining and Paining after Calving and Lambing, and is the remedy for Swollen Udders and Sore Teats.

Price 2s. 6d., 3s. 6d., and 7s. per bot.

For full particulars apply—

ROYAL ANIMAL MEDICINE MANUFACTORY,

22 DORSET ST., LONDON, W.



Add a new source of income to your business by taking up

Laurence's ONE-SOLUTION Hair Dye

In nine shades — Raven Black, Black, Dark Brown, Brown, Medium Brown, Light Brown, Golden Brown, Auburn and Chestnut.

**THE BEST ON THE MARKET.
ABSOLUTELY RELIABLE.**

Show over 100 per cent. profit.

Can be supplied under Chemist's own title if preferred, and exclusive design of carton and label reserved in any one town.

Write at once for particulars to—

C. R. HARKER, STAGG & MORGAN

Devon Wharf, Emmott Street, LTD.

MILE END, LONDON, E.

PLEASE NOTE THAT

ALFRED COOK & CO.'S

(of Enfield)

SPECIAL SALE

:: which was advertised in this Journal on July 22nd ::

Will definitely CLOSE on AUGUST 31st.

Those who have ordered lists and samples will kindly send their orders as soon as possible, as stocks are now limited.

True Bermuda Arrowroot

TRADE MARK.



REGISTERED.

is shipped only by W. T. James, Hamilton, Bermuda, who desires to warn buyers against "so-called" Bermuda Arrowroot which is being freely offered and sold in the United Kingdom as genuine Bermuda. Recommended by the Medical Faculty.

For Samples of the Genuine Bermuda Arrowroot apply to

George Harker & Co., Ltd., 101/103 Upper Thames Street, London, E.C.

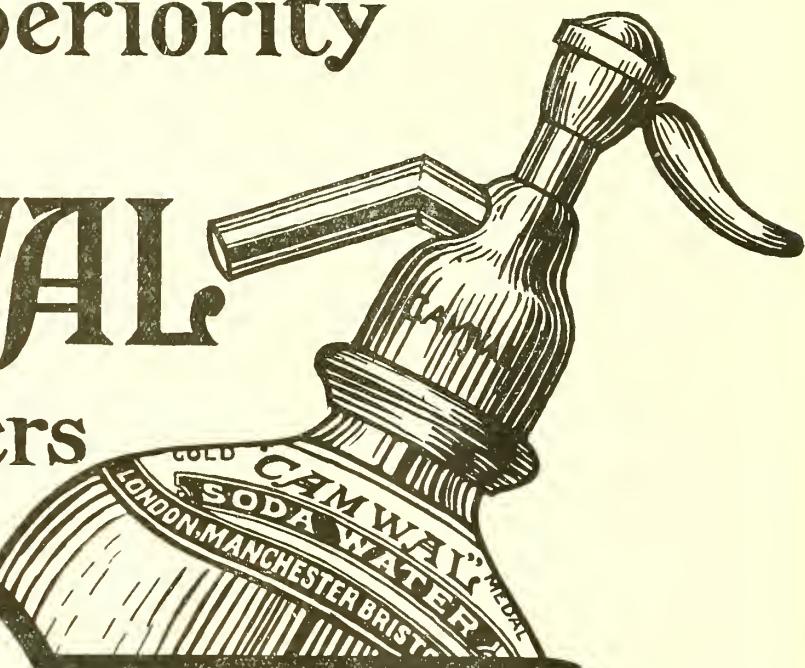
BELGIAN CAMOMILE FLOWERS NEW CROP.

DIRECT SHIPMENTS IN ORIGINAL BALES C.I.F. U.K. PORTS

ENQUIRIES FOR SAMPLES & SPECIAL OFFERS SOLICITED (STOCK KEPT
IN LONDON)

Fredk. Boehm, Ltd., 16, Jewry St., London, E.C.

The Superiority of **CAMWAL.** Table Waters



is
Indisputable.

They command a ready Sale wherever introduced, as for Purity, Aeration and Palatability, they are unexcelled.

The High Quality of the Camwal products is maintained by watchful analytical control, by the use of only the best and purest ingredients, and by the most careful and standardised methods of manufacture.

An unique advantage of the Camwal Gold Medal Table Waters is the printed statement on the labels of the Proportions of Ingredients. Medical Men and Chemists can appreciate this important feature, and can, for instance, confidently recommend "Camwal" Lithia

Water as being
in fact Lithia
Water.

Samples, Literature, &c., from

CAMWAL, Ltd.

Head Office: 112 PEMBROKE ST., N.
LONDON, MANCHESTER, BIRMINGHAM,
BRISTOL, HARROGATE AND MITCHAM.

Of course you make your own tea—

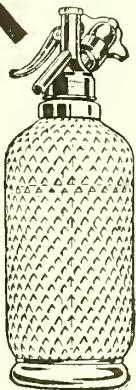
you make it at home in a tea-pot—fresh when you want it. Why not make your Mineral Waters in a

'Prana' Sparklet Syphon

and have them pure and fresh just when you want them?
Making Mineral Waters with a Sparklet Syphon is as easy as making tea, and costs only 1/4 a dozen Syphons.

'Prana' Sparklet Syphons and Bulbs can be obtained at all Chemists and Stores. Price of Syphon 2 6, Double sized 4-

Order one to-day, or fill in and post this Coupon to the Sole Manufacturers.



COUPON. Please send me booklet and full particulars of the 'Prana' Sparklet Syphon.

Name.....

Address.....

Cut out and post to

AERATORS, Ltd. (Dept. C & D 2), UPPER EDMONTON, LONDON, N.

¶ The above is a reproduction of another of the forceful, 'pulling' advertisements of Sparklets now again appearing regularly throughout the United Kingdom.

¶ Look out for one in your neighbourhood. It is sure to bring customers to your establishment.

¶ We refer all direct enquiries to the Trade.

NATURAL MINERAL WATERS, &c.



SOLE AGENTS
FOR

VICHY

(STATE
SPRINGS).

CARLSBAD WATERS, CARLSBAD SPRUDEL-SALT.

AESCALAP,
BONIFACIUS,
CONDAL,
CONTREXEVILLE,
EVIAN,
FRANZ-JOSEF,
FRIEDRICHSHALL,
GIESKHUBLER,
GUBERQUELLE,

Wholesale Agents for
HUNYADI JANOS,
INSALUS,
KISSINGEN,
KRONENQUELLE,
LEVICO,
MONTREUX,
OBERBRUNNEN,
OBER-SELTERS,

PERRIER,
ROSBACH,
RUBINAT,
ST. GALMIER,
VALS,
VILLACABRAS,
VITTEL,
WILDUNGEN,

And all other Natural Mineral Waters.

Price Lists, Show Cards, Dummy Bottles, Pamphlets, &c.

(1)

INGRAM & ROYLE, LTD.,

EAST PAUL'S WHARF,
26 UPPER THAMES ST., E.C.

AND AT LIVERPOOL AND BRISTOL.

SPECIAL DISCOUNTS FOR EXPORT.

A. MILLAR & CO., LTD., DUBLIN PURE ORANGE WINE

(VINUM AURANTII, B.P.), prepared in strict accordance with the Formula of the British Pharmacopœia. (Wholesale only.)
WRITE FOR SAMPLES TO 10, 11, and 12 THOMAS STREET, DUBLIN.

SODAWATER MACHINERY

THE "COMPACT" MACHINES

are specially designed for

CHEMISTS, GROCERS, RESTAURATEURS,

and everyone to whom space is an object,
and can be used for filling Syphons, Codd's
Bottles, or Cork Bottles.

OCCUPY LITTLE SPACE!

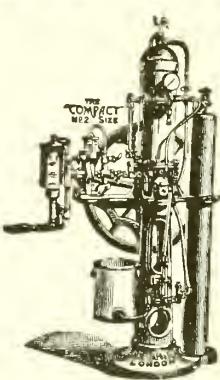
ARE READY FOR USE IMMEDIATELY!

REQUIRE NO FIXING!

Produce Soda Water, Lemonade, &c., of the
highest class and greatest purity.

Write for Catalogue.

A COMPLETE APPARATUS--
CAPABLE OF PRODUCING OVER
300 DOZEN LARGE BOTTLES
OF AERATED WATER PER DAY
—from £20.



Bottles, Boxes, Essences, and all
Requisites for the Trade at
Lowest Prices.

BARNETT & FOSTER, Niagara Works, 26^T Eagle Wharf Road, N.

Proprietors of Galloway, Bros., Bolton.

BUVO —

The 1909 line; before 1909 impossible to produce. A combination—in tablet form—of the finest Colonial Beef Extract and Garden Vegetables, nothing else. Sells as a twin tablet for one penny—sufficient for two cups. Try it yourself and note result. You can sell this line on your reputation, and add to it! Try a sample parcel. You will find your customers returning for more.

The Gold Medal Consommé TABLET.

Turn over your stock, and find the article that shows you a better profit, then give the two lines an equal advantage, and again note results. We can supply it to you at 8s. per gross cubes; it shows 33½% profit, but if you send in your opening order now, we will add 25% to it in goods. Order 5 gross; if you pay for four, we will pay for one. Put up in 6's, 12's, 72's and 144's. On P.A.T.A.

26 ROSEBURY AVENUE, LONDON, E.C.

BUVO —

Brand's MEAT JUICE.

IN BOTTLES,

Price 28/- per dozen,

Less the usual discount.

BRAND & CO., LTD., MAYFAIR, W.

To H.M. The King, The Empress of Germany, &c.



LOFTHOUSE & SALTMER, Wholesale and Export Drug Merchants, Manufacturing Chemists, HULL.

Offer the Trade the following valuable P.A.T.A. Protected lines, bearing a very large Protected Retail Profit, which sell freely and are well known and valued by the Public in many parts of the Country.

| | PROTECTED RETAIL PRICE. | DOZEN. |
|--|-------------------------|----------|
| LOSALL'S SALT (well advertised), tins ... | 6d. | 3/6 net. |
| " " " bottles | 1/- | 7 - " |
| in cartons ... | 1/6 | 10/6 .. |
| LOSALL'S MILK FOOD, oblong tins 1/- size. Ideal Food for children and adults ... | 8½d. | 5/6 .. |
| FINEST HYGIENIC FIRST MILK FOOD "Crown Brand," specially adapted for infants from birth to 3 or 4 months, tins 1 3 ... | 1/- | 7/6 .. |

| | PROTECTED RETAIL PRICE. | DOZEN. |
|---|-------------------------|---------|
| PREPARED BARLEY ("Crown Brand.") Usual 1/- size, lever lid tins. A good selling line ... | - | 4/- net |
| MALTLED FOOD. Usual 1/- size, lever lid tins. Buyer's name and address printed free on 3 dozens. Special design label, name and address, on gross orders if desired ... | - | 4/8 .. |
| LOSALL'S FOOT-ROT OINTMENT, ... enamelled tins | 1/- | 7/0 .. |

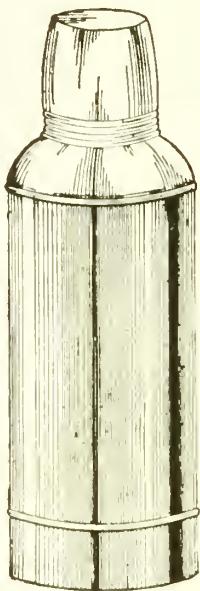
Chemists taking up the above really valuable, large profit-yielding lines, will find them an important adjunct to their business.

London Agents: F. NEWBERRY & SONS.

If you want close up-to-date Quotations for superior and approved Counter Specialties, and for Pure Drugs, Chemicals or Pharmaceutical Preparations, don't fail to write to

LOFTHOUSE & SALTMER, Wholesale Druggists, HULL.

THE ***THERMOS*** FLASK—for Lactonised Milk.



THERMOS Flask not only keeps liquids steaming hot for 24 hours and cold liquids icy cold for days without fire or chemicals, but by testing and experiments by able Medical Men it has been proved to be the **easiest, simplest, and most effective** mode of producing Lactonised Milk. The *modus operandi* is as follows:—

Heat your milk to a temperature from 105° to 110°—

Pour into **THERMOS** Flask with one tablet of Lactic Acid and a spoonful of sugar. Allow the milk to stand from 10 to 12 or more hours, and perfect Lactonised Milk is the result.

This means MINIMUM trouble—MAXIMUM results

MEDICAL MEN ARE LARGELY RECOMMENDING THE FLASKS TO PATIENTS.

Prices from 21/- each PINTS and 31/6 each QUARTS.

They can be obtained of all CHEMISTS and DRUGGISTS, JEWELLERS, SILVERSMITHS and STORES.

Wholesale only: A. E. GUTMANN & CO., 8 Long Lane, London, E.C.

Telegraphic Address—"SACARINO LONDON."

Telephone Nos. 197 Bank and 1529 Central.

The Saccharin Corporation, Ltd.
Offices—165 Queen Victoria Street, London, E.C.

SACCHARIN,

Made in
England.

Highest Possible Strength.—550 times sweeter than pure Cane Sugar. This strength is recommended in preference to any other.

Ordinary Strength.—330 times sweeter than pure Cane Sugar.

Soluble.—500 and 300 times sweeter than pure Cane Sugar.

Crystals.—450 times sweeter than pure Cane Sugar.

Crystallose.—440 times sweeter than pure Cane Sugar.

N.B.—The Three last Strengths are Soluble in Cold Water.

THE SACCHARIN CORPORATION, LIMITED, are the owners of All Patents for the United Kingdom and Colonies, except India and Canada, for the commercial manufacture of Saccharin, and their Saccharin is the only Saccharin that can be purchased without RISK OF LEGAL PROCEEDINGS or the necessity of ANY INDEMNITY.

The Saccharin Corporation. Ltd.

Manufactory—8 and 9 Ewer Street, Southwark, London, S.E.

BELLOW

ARE JUST A FEW OF
HORNER'S

SPECIALITIES, for which they are
renowned all over the world . . .

Vittoria Liquorice Juice.

High-class Trimmed and Powdered
Rhubarb.

Genuine Otto of Roses.

Absolutely Pure English-distilled Sandal-
wood Oil.

Best Selected Druggists' Opium.

Cut Sarsaparilla of all kinds.

Powd red Ipecac. and Jalap.

A large stock of all Gums, Roots, Barks, &c.,
in ordinary form and powder, always kept.

HORNER & SONS,

24 GEORGE STREET, TOWER HILL, E.C.

(Late of Mitre Square, Aldgate)

And 20 BUCKLERSBURY.

B. A. SMITH & CO., 4 CHURCH ROW, ALDGATE,
LONDON, E.C.

(HENRY BOYCE, Manager), AGENTS FOR

JOH. DIEDR. BIEBER, HAMBURG:

Tinctures, Ethers, Liniments, and Spirituous Extracts, &c., prepared with purest Spirit, and from best quality of raw Drugs, in accordance with requirements of British and other Pharmacopœias, Iodoform (absolute), Iodine Resublimed, Potassium Iodide, Sodium Iodide, all Preparations of Bromine, Santonin (from Turkestan factory), Cocoa Butter, Castor Oil, Chloroform, Cod Liver Oil, Resina Jalapæ, Resina Scammonia.

DE DIETRICH & CO.'S ACID-PROOF ENAMELLED CAST IRON APPARATUS,

Standing the strongest corrosives and highest pressures, for the Chemical and kindred industries.

R. SCHUCHARDT, TRIESTE: Insect Powder, Insect Flowers, &c.
CARL KELLNER, ARLESBERG (in Thür.): Thermometers and Chemical Glassware.

ESFON

A Powder-Food that CURES.
Reinforces the NERVES.
Strengthens the system.
Appeals especially to Vegetarians.
Most palatable and really curative.
Interesting booklet on the relation
of food to the nervous system.
A booklet on the counter and the
Food sells itself.
Minimum retail price, 1/6, 3/-, 6/-.

**The
Nerve
Food.**

ESFON

C. J. BURT,
12 & 13 Henrietta St., London, W.C.

Prepare for a Change

PUSH THE SALE OF YOUR
OLD STOCK OF

**HIMROD'S
Cure for Asthma**

Our New Style Package
appears soon and every dealer
should be ready to meet the
demand for it.

The Original Advertising
Features of our new package
will increase its sale and meet
with your favour.

BE PREPARED!

POINTET & GIRARD

2 Rue Elzévir, PARIS.

PARIS 1900 : Gold Medal. MILAN 1906 : Diploma of Honour.
LONDON 1908 : "GRAND PRIX."

MANUFACTURERS OF

Quinine Salts, Glycerophosphates,

BIPHOSPHATES, LACTOPHOSPHATES CITRATES,
GLYCRRHIZINE, PROTEINATE OF SILVER,
QUININE WITHOUT BITTER TASTE FOR EXPORT,
ALCALOIDES, &c.

SPÉCIFIQUE BÉJEAN, THYROIDINE.

Agents: F. J. CARMICHAEL & CO.,
14 Water Lane, London, E.C.



POTTER & CLARKE LTD.

THE ORIGINAL MAKERS

RASPBERRY

— and —

SULPHUR CREAMS

4 lb.

Boxes

8d.

per lb.

28 lb.

Lots

65/-

per cwt.



Better than Sulphur Tablets.
Only show them,
They sell themselves.

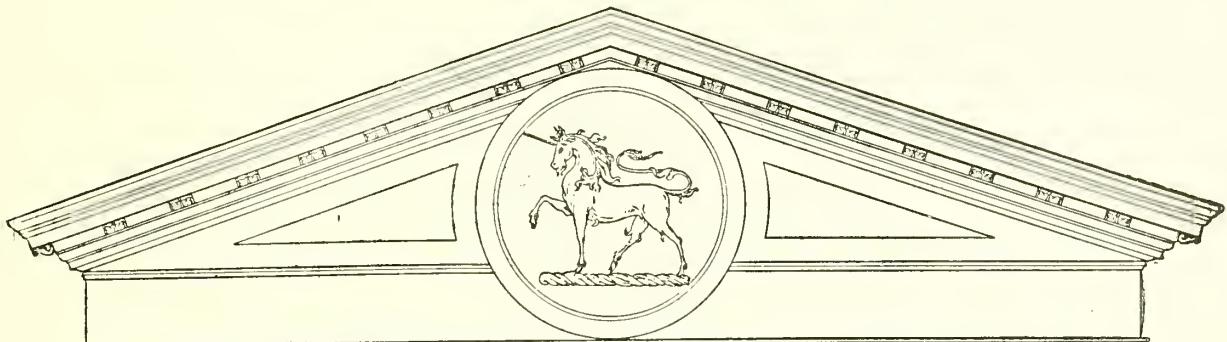
Free Sample on receipt of Post Card.

POTTER'S
ASTHMA
CURE

GROWERS & IMPORTERS
OF
HERBS. ROOTS. & BARKS

HERBS
IN
PACKETS

POTTER & CLARKE, LTD. WHOLE-SALE DRUGGISTS
EXPORTERS IN BOND
60-64. ARTILLERY LANE. LONDON. E...



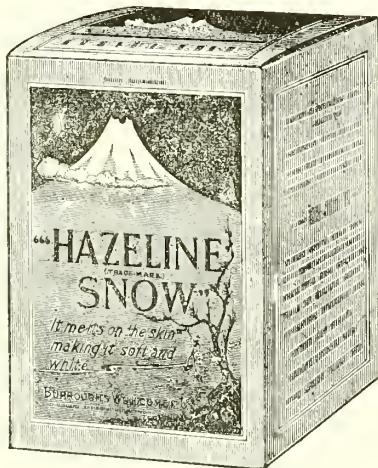
“HAZELINE’ SNOW” *(Trade Mark)*

In town or country and at the seaside the pharmacy window will be made profitable and attractive if “HAZELINE’ SNOW” is prominently displayed.

With outdoor sports in full swing there is a great demand for this delightful skin balm.

“HAZELINE’ SNOW” attracts the best class of custom and keeps it.

Supplied in glass pots with nickel-plated screw caps, at 11/- per dozen



Two-thirds actual size

BURROUGHS WELLCOME & CO.
LONDON (ENG.)

Branches: NEW YORK MONTREAL SYDNEY CAPE TOWN SHANGHAI

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WARRICK BROTHERS,

6 NILE ST., LONDON, N.

- THE - STANDARD TABLET & PILL CO. HOVE.

ONE OF OUR MOST SUCCESSFUL LINES

Formalin Throat Tablets.

Mint, Rose or Menthol Flavour.

50 TABLETS in Amber Bottle

PER DOZEN **6/-** PER DOZEN

Carriage Paid. Name and Address Free.

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"THE CHEMISTS' AND DRUGGISTS' DIARY, 1910."

THIS popular Annual is already in course of preparation, and firms who desire business announcements to appear in it will facilitate the large amount of work in hand by intimating to the Publisher as early as possible the amount of space they desire to be allocated to them. The permanent character of the *Diary*, which is the desk companion of subscribers to THE CHEMIST AND DRUGGIST during the whole of the year, makes it a particularly effective medium for publicity, while the original, unique, and useful "Buyers' Guide" which it contains creates business daily for *Diary* advertisers. The issue for 1910 marks the forty-second year of publication, and will, it is hoped, excel its predecessors in practical utility. Full particulars as regards terms can be obtained from the Publisher, 42 Cannon Street, London, E.C.

Summary of the Week.

"C. & D." Jubilee.

We print more congratulations and appreciations on the Jubilee Number on p. 340.

Students.

Another instalment of the series of articles on the microscope is given on p. 328. The appearance of starch-granules is particularly dealt with.

Correspondence.

The letters which appear on pp. 355-7 deal with palatinoid prices, essential-oil adulteration, Italian citric materials, future of the drug-trade, apothecaries' assistants, and the sale of proprietary articles. Numerous replies to correspondents are given on p. 358.

Side-lines.

Chemists who specialise in dentistry (p. 347) and veterinary medicines (p. 347) or deal in spectacles (p. 349) and photographic goods (p. 349) will find notes specially interesting to them on the pages indicated. Some observations on business knowledge on pp. 341 and 348 should also be noted.

Martial.

A young pharmacist who has been in camp with the Territorials gives his experience on p. 345. Australian pharmacists have expressed their desire to take place in the Commonwealth defence scheme (p. 334), and at home further developments are taking place in the Territorial defence scheme (p. 329).

Rubber.

There has been a phenomenal rise in the price of rubber, that article being now worth three times as much as it was in February 1908. This has caused rubber sundries to advance in price. The position is discussed on p. 342, and we also give the opinions of makers and dealers in rubber goods (p. 345).

Indian Drugs

are of considerable interest, and several were included in the B.P. Addendum. A report by the Indigenous Drugs Committee shows that Indian podophyllum is quite as active as the American drug, but the other remedies investigated do not show appreciable advantages over established drug (p. 343).

Parliament

has been busy this week with the Finance Bill. Among the supplemental matters dealt with in questions have been the motor-spirit tax, spirit-duties yield, medicated-wine licences, and carbon tetrachloride as a hair-wash (p. 339). A note on the relative toxicity of chloroform and carbon tetrachloride on p. 344 is interesting in view of the last-mentioned subject.

Home News.

The question of poison-licences does not loom so largely on the horizon; only a few licences have been granted (p. 336). Another case under the Merchandise-marks Act for falsely applying the trade-description of Beecham's pills is reported on p. 338. Extracts from analysts' reports are given on p. 329. The hot weather has caused a demand for aerated waters (p. 330). Several fires on chemists' premises are reported (p. 330).

News Abroad.

In Australia the news items chiefly concern the Food and Drugs Acts of South Australia and Victoria (p. 334). In France two legal decisions regarding the use of trade-names and patents are of interest (p. 332), and a note on suggested legislation from the assistants' point of view. The International Aeronautics Exhibition at Frankfort is referred to (p. 333), and the yield of Japanese taxes on proprietary medicines is given (p. 333). The report of the Cape analyst is summarised on p. 335, where will also be found suggested recipes for inclusion in the Australian Formulary.

Trade Matters.

The Preanger (Java) combination of cinchona planters, in endeavouring to bring about an improvement in the bark industry, propose to cease supplying the Bandong Quinine Works, and intend to memorialise the Dutch Government asking them to do likewise (p. 334).

The advances in glycerin, strichnine, and opium are prominent features in the markets this week, apart from these fluctuations are slight, these including a firmer tendency for bergamot oil, copper sulphate, turpentine, and cod-liver oil. Castor, lemon, orange, spearmint oils, and copaiba are easier (p. 351).

Corner for Students.

Conducted by Leonard Dobbin, Ph.D.

SUMMER CONTRIBUTIONS.

The Microscope for the Young Pharmacist.

By J. C. Shenstone, F.L.S.

II.

WHEN the student has mastered the working of his microscope he usually seeks suitable materials on which to try his 'prentice hand at microscopical investigation. Starches, which require little preliminary preparation, are excellent subjects to commence with, and also afford good tests for the definition attainable with lower-power objectives. Moreover, the purity of the official starches can only be confirmed by recourse to the microscope, while the starch granules in drug tissues are frequently sufficiently characteristic of their origin to aid in the identification of the drug in section and powder form or in the detection of the presence of foreign starch. The pharmaceutical microscopist therefore cannot do better than commence his microscopical practice by a careful study of

STARCH GRANULES

Potato starch is not only a starch easily obtainable in a state of purity, but its granules are large and characteristic. It will serve better than any other for our preliminary experiments, and a specimen is quickly obtained by scraping a little juice from the freshly cut surface of a potato. A little of this juice is transferred, on the point of the knife, to the centre of a clean glass object-slide (glass slides, measuring 3 in. by 1 in., are obtainable at small cost from any dealer in microscopical appliances). A drop of water is then added from the end of a glass rod or by means of a dropping-tube. A cover-glass is now placed with one edge touching the margin of the drop and carefully lowered to exclude air-bubbles. With a little practice the correct size of drop can be gauged which will extend to the periphery of the cover-glass without flooding the slide. Thin glass circles about $\frac{1}{2}$ in. in diameter are the most convenient form of cover-glass. They should not be too thick, and owing to their fragile nature care must be taken in cleaning them. Gentle rubbing between the thumb and first finger in the folds of a soft linen handkerchief is a suitable method of removing dirt. It sometimes expedites matters to moisten the finger and thumb with water before taking hold of the handkerchief. The drop of water should spread quickly between the slide and the cover-glass if both are clean and free from grease. Some workers prefer to keep cover-glasses in a wide-mouth stoppered bottle containing absolute alcohol, to prevent the formation of troublesome grease films. The method works well, but entails considerable breakage of cover-glasses. The slide may now be placed in position, with the centre of the cover-glass under a 1-in. or $\frac{3}{4}$ -in. objective, which magnifies sufficiently for the study of potato starch. For the smaller granules of other starches a higher-power objective is usually required. The tube of the microscope should now be racked or slid cautiously towards the object until it is quite close to it. The eye is then applied to the aperture of the eyepiece and the objective raised slowly until the starch granules appear in the field of vision. Solid transparent bodies, marked with laminations called striae, are thus rendered visible. A group of granules with clear markings must be selected for particular attention and the striae rendered as clear as possible by careful focussing and manipulating the light by means of the reflector below the stage. By using the draw-tube the most suitable magnification can be obtained. If the enlargement is too great, only a portion of the granule will be in focus, the other portions being "fuzzy." Any water exuding from under the edges of the cover-glass should be carefully wiped off, as confusion of the image results if water comes into contact with the objective. The grains will be observed to be eccentric in outline, with a small spot, the hilum, at one end, but not in their geometric centres. The hilum forms the centre around which the striae are concentrically or eccentrically arranged. Any round bodies with a dark margin will probably be air-bubbles, with which the student will soon become familiar unless care is exercised in lowering the cover-glass upon the drop of

fluid to be examined. Having familiarised himself with potato starch, some bean flour should be examined in the same manner. The starch granules will be found to be ovoid or elliptical in outline, while the smaller grains are often circular in shape. The striae are much more regular and closer together than in the potato starch, while a cleft with branching cracks extends through the hilum nearly from end to end of the grain. Some of the meal scraped from the centre of a grain of wheat will provide almost circular starch grains which vary greatly in size and have striae difficult to recognise. Some friendly drug-house should next be approached for a supply of small samples of various starches. Tous les mois will be found to have oval granules even larger than potato starch. Among the other kinds I may mention rice starch, with minute angular granules; the different varieties of arrowroot, with grains resembling potato starch, but smaller, and the hilum usually at the broad end; oatmeal, with numerous smaller granules like rice, but also the large oval compound grains from which they are derived; maize starch is polygonal, and the hilum is usually cleft. Starchy drugs, such as ipecacuanha and belladonna roots, will afford further useful practice. If the student examines the milky juice of the common weeds known as spurge (e.g., *Euphorbia helioscopia*) little rod-like grains of starch will be seen floating in the latex.

THE ACTION OF REAGENTS.

should be also studied. "Irrigate" some starch mounted in water by placing a small drop of tincture of iodine on one edge of the cover-glass and withdrawing a little water from the opposite edge by means of blotting-paper. Care must be taken not to let the iodine come into contact with the objective or metal parts of the instrument. On watching it will be seen that, as the iodine comes into contact with the starch granules, they colour at first a bright blue and the striae stand out more clearly. The colour then gradually changes to a blue-black and the grains finally become opaque. This colour-reaction with iodine does not take place unless water is present, the grains only assuming a yellow or brown colour. Repeat the above experiment with the substitution of a solution of caustic potash (containing 5 per cent. of potassium hydrate) in the place of the iodine, admitting the reagent very slowly by slightly tilting the microscope. First the granules become transparent, the hilum and striae standing out very clearly; then the hilum ends of the granules will appear to become hollowed out and the adjacent wall to collapse. Finally the grain loses its shape and swells until it becomes an almost invisible jelly. The effect of heat upon the starch grains can be seen by heating the under-side of the slide over a spirit-lamp or a lighted match (avoiding blackening) until bubbles appear at one edge of the cover-glass. On examining the grains the progressive stages of gelatinisation of the granules can be seen, from intact grains or their first rupture (at the more watery hilum) at the less heated edge and the successive stages of disruption from the increasing effects of higher temperature. If two varieties of starch be mixed, it will be usually found that they possess different resistant powers to the effects of moist heat, as shown by the extent of rupture.

A few shillings well spent will enable the student to measure the starch granules by means of a simple micrometer. The principles of this measuring-apparatus are readily understandable. A scale is placed upon the diaphragm of the eyepiece and the number of divisions noted which corresponds with the diameter of the grain to be measured. A stage micrometer with finely ruled lines of a known distance apart ($\frac{1}{100}$ or $\frac{1}{1000}$ in., or fractions of a millimetre) is then substituted for the slide. The number of lines is then computed which corresponds to the number of divisions occupied by the starch grain, and a simple multiplication gives the correct diameter. The relationship of objective and eyepiece (length of optical tube) must not be altered during the measurements. Starch grains mounted in Canada balsam usually show dark crosses when examined by polarised light, or appear in brilliant colours if selenite or quartz screens are interposed between the two Nicol's prisms.

In last week's article (half-way down the second column) "concave reflecting surfaces" should have been referred to—not convex.

English and Welsh News.

Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Brevities.

The London National Cash Register Users' Protective Association have opened offices at 137 Saltram Crescent, West Kilburn, London, N.W.

Mr. John H. Sutcliffe, Secretary of the British Optical Association, informs us that certain exemptions which have been granted to qualified chemists ceased with the summer examination.

At the Mansion House Police Court on August 17, Hyman Lowden (32), described as a tinplate-worker, was fined 100*l.*, or in default four months' imprisonment, for being in the possession of 11 lb. of uncustomed saccharin.

The Hewlett Memorial Exhibition, the reference to which was omitted from the Educational Number, is available to students of the School of Pharmacy who have passed the Minor examination. Particulars were given in the *C. & D.* in the early part of this year.

The medical officer for Holborn (Dr. W. A. Bond) reports that only four tubes of antitoxin had been asked for during the past year. All the local practitioners had been notified that the serum would be supplied free of charge to the poorer inhabitants of the borough.

The Early Closing Association is already busy making preliminary arrangements for earlier closing during the autumn and winter months. Mr. Albert Larking, the assistant secretary, will preside at a meeting of shop assistants at Ilford on August 26.

A Royal Commission has been appointed to investigate and report upon the measures that may be taken for the promotion of closer trade relations and for the development of mutual trading facilities between the Dominion of Canada and the British West Indian Colonies.

Mr. Thomas H. Livesley, pharmaceutical chemist, on opening the Union Road establishment of Messrs. A. Livesley & Sons, New Mills, Derbyshire, on August 16, found the premises had been entered by burglars *via* a back window. The till had been rifled.

The Sheffield branch of the National Association of Medical Herbalists spent an enjoyable outing at Askern Spa on August 12. The journey to Doncaster was by rail, the remainder of the trip being completed by driving to Askern, where Mr. and Mrs. Rowley entertained the party to tea.

At Exeter on August 13, Gladys Collard (17), Heavifield, was charged with stealing toilet-requisites, value 5*s* 9*d.*, from the Market Street stores of Messrs. Holman, Ham & Co., chemists. The parents were also charged with being in unlawful possession of goods. Accused were remanded on bail.

Gangrene, caused by "putrid virus" affecting an open sore, was the cause to which the death of J. Nathan Holden, sewage-works labourer, Oakenshaw, was assigned by the Bradford Coroner's jury. It was stated that deceased possibly smeared his lips with some of the rat-virus he was putting down near a fowlhouse.

Mr. W. S. Bound, chemist and druggist, Llandrindod Wells, devotes half of the window-space of his double-fronted corner pharmacy to a choice display of original drugs with interesting notes thereon. The exhibits include an original tin of otto of rose, cassia-pods, jalap-tubers, camphor, colocynth apples, and Barbadoes aloes in gourd, with a special show-jar containing the deposit of ferric hydrate from 30 oz. of the chalybeate water for which this popular watering-place is renowned.

In a joint report on the schools in the Acton (Middlesex) district, Drs. D. J. Thomas and L. E. Wilson state that they have examined the sight of 159 boys and 160 girls between the ages of thirteen and sixteen. Of the former thirty-four (21 per cent.) were found to have defective vision to the extent of requiring treatment, while twenty-seven (17 per cent.) of the girls suffered similarly. Snellen's test type (6/12) at a distance of 20 ft. was the standard required to be read. On confirmation of defective vision

by use of the ophthalmoscope the parents of the children were urged to obtain medical treatment. In many cases it was found that parents were too poor to provide glasses, and a sum of 50*l.* has been granted by the Urban District Council towards the provision of spectacles in necessitous cases.

Territorial Army Scheme.

An important development of Mr. Haldane's Territorial Army scheme is about to take place. Sir Alfred Keogh, Inspector-General of the Army Medical Service at the War Office, has devised a plan of co-operation between the War Office, the County Associations, and the British Red Cross Society by which the general public will be invited to take a definite part in the defence of the country. The idea seems to be that all classes should voluntarily place their technical and professional services at the disposal of the country in case of war. Medical men, pharmacists, and pharmacists' assistants are mentioned in the draft scheme, pharmacists being referred to as the under-officers of the doctor, while the men are to be tradesmen and workmen.

Patent Revoked.

In the "London Gazette" of August 13 the following notice is given of surrender of letters patent under Section 26 (3), Patents and Designs Act, 1907 :

Notice is hereby given, that an Order was made on the 10th day of August, 1909, revoking the Letters Patent granted to Albert Knoll, Max Daeger, and Hans Knoll, for an invention for "Manufacture of santalol esters from sandal wood oil," numbered 17511 of 1905, and bearing date the 10th day of February, 1905.—W. TEMPLE FRANKS, Comptroller-General.

Sale of Food and Drugs Acts.

All the following samples examined in 1908 by the St. Pancras analyst were certified as genuine : Arrowroot, 8; glycerin, 7; camphorated oil, 5; olive oil, 2.

The Bethnal Green analyst states in his annual report that four samples of camphorated oil were examined during the year. The vendor of a sample deficient in camphor was fined 2*l.*, while another was mulcted in 10*l.* for selling a mixture of mineral oil and camphor as camphorated oil.

The following samples were taken for analysis in Poplar during the past year : Vinegar, 10; mustard, 6; pepper, 5; arrowroot, 3; glycerin, 2; olive oil, 2; quinine sulphate, 1; paregoric, 1; tartaric acid, 1; ginger, 1; compound powder of jalap, 1; compound tincture of camphor, 1. The compound powder of jalap was imperfectly mixed, a large proportion of cream of tartar being in lumps. The vendor was cautioned.

The Hampstead analyst examined the following samples during the past year : Gregory's powder, 4; camphorated oil, 3; distilled water, 3; lime-water, 3; liniment of iodine, 2; lemon squash, 2; olive oil, 2. All were genuine with the exception of one of the distilled-water samples, which was certified to contain 5*g* grains of extraneous matter per gal. It is stated that the legal proceedings failed owing to the Magistrate's doubt as to how the extraneous matter had got into the water.

The Wandsworth analyst (Dr. J. Muter) examined the following drug-samples during last year : Cream of tartar, 5; compound camphor liniment, 4; milk of sulphur, 4; camphorated oil, 3; mercurial ointment, 2; decoctum aloes co., 2; prescriptions, 2. One of the samples of compound decoction of aloes was 55 per cent. deficient in extractive and alcohol, the vendor being fined 20*s.*, and 33*s.* 6*d.* costs. A mixture obtained by prescription contained 0.074 grain of total alkaloids per fl. oz in excess of that prescribed.

The Bermondsey analyst reports that all except one of the following samples examined last year were genuine : Ginger-wine, 8; cod-liver oil, 4; lemon squash, 3; tartaric acid, 3; lemonade-powder, 2; soda-water, 2; camphorated oil, 2; olive oil, 2; glycerin, 2; liquorice, linseed, and chlorodyne lozenges, 1; compound liquorice powder, 1; castor oil, 1; citrate of magnesia, 1; lung-syrup, 1; lime-juice and soda, 1; bicarbonate of soda, 1; lime-juice, 1; orange-wine, 1; soothing-syrup, 1; green-ginger wine, 1; raspberry-cordial, 1; ammoniated tincture of quinine, 1. The sample of ammoniated tincture of quinine was 47 per cent. deficient in sulphate of quinine, and the vendor was fined 40*s.*, with 15*s.* costs.

The Kent county analyst (Dr. M. A. Adams) suggests in his quarterly report that it should be made an offence under the Sale of Food and Drugs Acts to use any substance other than hops for the bitterness of beer, or any material such as salicylic acid for the preservation of beer. The County Council have resolved to communicate with the Government with relation to the suggestion. Dr. Adams states that other bittering-agents, such as quassia, do not impart the wholesome bitterness of the hop, and antiseptics like salicylic acid cannot replace this natural preservative. He says that salicylic acid has no rightful place in an article of diet.

Disinfection.

The Islington medical officer (Dr. A. E. Harris) reports that 2,533 rooms were disinfected during 1908, as compared with 2,402 in 1907. Formaldehyde, in gaseous or spray form, was used as a rule, but sulphurous-acid gas was employed in a few cases where vermin was present. It is stated that people are usually very willing to have their rooms disinfected.

The Paddington medical officer (Dr. R. Dudfield) states that 2,223 rooms were disinfected by spraying with formaldehyde during the year, as compared with 2,552 in 1907, and 2,166 in 1906. Cartons of chloride of lime and cakes of carbolic soap were distributed to a small extent only, as the popular use of disinfectants was held not to be equal in efficiency to ordinary domestic cleansing. The total amount spent by the Department on disinfectants was 147. 14s.

The Hot-weather Boom.

The recent oppressive weather in Manchester has caused a local daily to report as follows: "Chemists say the demand for saline draughts is very large at present, and one well-known city dispenser affirmed that the demand for bubbly refreshment had exceeded anything experienced either this or last year. Busy men were popping in all day for 'blood-coolers,' and there was a colossal run on syphons. . . . Ten days ago people were still wearing their winter overcoats."

The spell of hot weather has resulted in brisk business for seaside chemists. People unaccustomed to exposure suffer from slight attacks of sunstroke, while too ripe or unripe fruit has produced a diarrhoea of the mild cholera type. One chemist had over a hundred calls for draughts alone during the busiest time of one day. The more severe cases were sent to the nearest doctor, which has resulted in the doctor's personal thanks and the "visitor" patient being sent back with prescriptions to be dispensed.

Fires.

Fire created considerable damage, on August 16, on the premises of Messrs. Coxeter & Sons, surgical-instrument makers, 18-20 King's Road, Camden Town, London, N. The first floor was practically burnt out.

Some straw caught fire from contact with a lighted candle in the basement of the premises of Mr. F. Hart, chemist and druggist, 130 Newport Street, Bolton; but the flames were subdued before much damage had been done.

Overheating of the material for making disinfectant-shells caused an outbreak of fire on August 14 at the Broomhall Street premises of Messrs. B. Waterhouse, Ltd., chemists, Sheffield. No serious damage was done.

The ignition of some inflammable vapour caused an outbreak of fire at the warehouse of Mr. R. C. Johnson, chemist and druggist, Grimsby, on August 11. The store is situated at the rear of Mr. Johnson's establishment in the Old Market Place, and the firemen encountered considerable difficulty in dealing with the flames owing to the acrid fumes. The damage is estimated at 300*l*.

Electric Signs.

The application of Timothy White Co., Ltd., for permission to erect sign letters outside their premises in Russell Street, Portsmouth, was granted by the local Town Council on August 17 at an annual encroachment fee of 10*s*. It was mentioned that the application was a test case, as tradesmen who had ignored the police and Corporation in erecting signs had acquired a right which the Roads and Works Committee refused to applicants.

It also transpired that the letters (an electric sign, "Cash Chemists") had already been erected and projected 3½ in. beyond the fascia.

Midland Notes.

Dr. J. Coole Kneale, formerly a pharmacist, has been reappointed lecturer on *materia medica* at the University during the coming session.

The Stoke-on-Trent Guardians require a resident medical officer who will undertake the dispensing. The drugs and appliances will be provided at the Union's expense.

Miss C. M. Fox, chemist and druggist, of the Cheltenham Hospital, contributes some poetry to the local Press which is placed in a conspicuous position. She was formerly head of St. Pancras Infirmary dispensary, London.

Correspondence in the "Birmingham Mail" on "The Plague of Flies" has resulted in the following remedies being advocated: Formaldehyde, even to its correct pronunciation, a few bunches of mignonette, a dash of oil of sassafras, treacle mixed with one-twelfth its weight of orpiment, and, of course, quassia chips one ounce to one pint of water, and four ounces of treacle. An old Sepoy mutiny warrior (1857) tells how oil of eucalyptus was used then for mosquitoes, and writes "such exists on his mantelshelf without a single fly in the room."

Manchester Notes.

No fewer than three well-known local pharmacists are joining the ranks of Benedicti this month. Perhaps the trade boom gives brighter hopes.

A fierce thunderstorm, accompanied by torrential rain, visited the district on Monday. The cellars of two pharmacies on the outskirts of the city were flooded to the depth of two or three feet.

An electrically driven model in a chemist's shop-window has been attracting huge crowds daily in one of the main thoroughfares for the past fortnight. Many of the onlookers wonder how it is done.

The demand for photographic materials and diarrhoea-mixture, owing to the sudden burst of hot weather, has caused a suburban chemist to put a photographic poster on one window, and "Try Our Celebrated Diarrhoea Mixture" window-bill on the other.

Mr. Knight's Protest.

Councillor George J. Knight, chemist and druggist, 452 Edgware Road, London, W., was summoned, at the Marylebone Police Court on August 14, for non-payment of a general rate amounting to 17*l*. 10*s*. Mr. Knight, in the course of a spirited protest, asked what had been done for the increased rate. The Marylebone Borough Council depute a portion of their work (the paving of a part of Edgware Road) to the Paddington Borough Council, but, as a matter of fact, the paving was absolutely neglected. Mr. Knight, after mentioning that the road had been better cleansed since his previous protest, concluded by saying, "We have to pay whether we get anything or nothing, and we shall have to consider whether we won't go into seclusion for a few days as a protest." The Magistrate sympathised, but made an order for payment of the rate.

Bradford Chemists' Association.

At a special meeting of this Association held on August 17, Mr. John Gordon (President) in the chair, the question of the Parliamentary Representation Fund was discussed.—Mr. Marshall said he did not think they knew enough about the matter to deal with it any further than they had done by their vote of 5*l*. to the funds. He did not think one man could do much good in Parliament.—Mr. H. R. Jackson said the doings of the Bradford and Keighley authorities in regard to the poisons-licences showed how ineffective was the influence of chemists. If anything could be done that would give greater strength to the chemists as a craft, it was worth doing.—Mr. Firth thought that if chemists failed to provide the necessary funds for the next election they would be making a serious mistake.—Alderman Dunn said the proposal was a sheer waste of money, and chemists were not people who had any money to throw away. One man in 670 would simply be beating the air. The work could be far better done by a Parliamentary Agent, whose salary should be increased to such an extent

as to enable him to devote all his time to the work.—After further discussion it was decided to carry out a personal canvass. A committee was constituted composed of the Divisional Secretaries and Messrs. Gordon, Wilcock, Silson, and W. E. Metcalfe. Mr. Firth drew attention to the increase of the spirit-duty, observing that he had seen an announcement by a chemist that he was not increasing his prices. He thought that every chemist should maintain the advance.—Several members said that they found no difficulty in getting the advanced prices, and one or two said that the demand for spirituous preparations had increased, for the reason that more people had been brought to realise that these preparations contained alcohol, and were keener to purchase on that account.—Alderman Dunn suggested that they ought not to let the action of the local authorities in regard to agricultural and horticultural poison licences pass without protest of some sort, and it was decided to ask that before any further licences are granted the representatives of the Association should be allowed to appear before the Watch Committee to oppose the applications.

The Co-operative Movement.

The quarterly report of the Batley Co-operative Society shows that the turnover for the thirteen weeks ended July amounted to 239*l.* 7*s.* 5*d.* (8*3*/₄ per cent. of the total takings), against 278*l.* 19*s.* 3*d.* in the previous quarter. The expenses incurred on behalf of the drug department were 447*l.* 15*s.*, including 26*l.* in productive wages, being at the rate of 5*s.* 2*d.* in the pound. The net profit is stated at 21*l.* 8*s.* 4*d.*, the rate of profit being 1*s.* 9*d.* in the pound. In the buildings and fixed stocks account the drug and dispensing shops and café are grouped together at 3,667*l.* 12*s.* 6*d.*, including 3*l.* 1*s.* added during the quarter. Two circulars are enclosed with the report—one relating to "Prara" tablets for rheumatism, and the other stating that a dental surgeon is in attendance at the drug department on Wednesdays.

Cricket.

Idris C.C. v. Christchurch C.C.—This match, played at Elm Grove on August 14, ended in a win by the latter team by 54 runs to 47.

Burgoyne Burbidges' C.C. v. Allenbury's C.C.—The teams met at Wadham Lodge, Walthamstow, on August 14. Burgoyne's compiled a total of 96 runs against 46 scored by their opponents.

Irish News.

Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Brevities

Mr. Thomas McGgettigan, pharmaceutical chemist, has opened a pharmacy at Market Street, Strabane.

Mr. John Townsend Trench, J.P., inventor of "Trench's Remedy," died last week in his seventy-third year.

Guardians' Doings.

The Baltinglass Guardians are endeavouring to trace empties which Messrs. Boileau & Boyd, the drug-contractors, say have not been returned. Dr. T. Kidd, one of the medical officers, states that he sent the empties to the station in his own car, and Dr. McCormack states that he himself saw the empties packed and given in charge of the carrier. Messrs. Boileau & Boyd reply that the empties have not yet arrived.

Arrangement.

Mr. C. P. Fairweather, pharmaceutical chemist, 107 Upper George's Street, Kingstown, co. Dublin, has arranged to pay his creditors 10*s.* in the pound, in six equal quarterly instalments. Among the creditors are Boileau & Boyd (Dublin), 14*l.* 15*s.*; Evans Sons Lescher & Webb (Liverpool), 350*l.*; H. C. Grimes (Blackrock), 50*l.*; Harker, Stagg & Morgan (London), 51*l.* 10*s.*; May, Roberts & Co., 28*l.*; H. Silverlock (London), 12*l.*; Thwaites & Co., Ltd. (London), 24*l.* 5*s.*

Agricultural Seeds.

The Weeds and Agricultural Seeds (Ireland) Bill mentioned in the *C. & D.*, August 7 (p. 266), provides that

any officer of the Agricultural Department shall have power at all reasonable hours to enter the shop or premises of any person selling agricultural seeds and take samples of the seeds. The Department would test the seeds for purity and germination, and publish the results. The agricultural seeds in the Act are the seeds of grass, clover, flax, cereals, turnip, rape, mangel, carrot, cabbage, and parsnip.

Deaths from Poison.

The report of the Registrar-General for Ireland for the year 1908 gives a table showing the deaths from poison, including industrial poisoning. The following are the particulars, excluding the deaths caused by food-poisoning : Hydrochloric acid 1, carbon dioxide and monoxide and coal-gas 6, hydrocyanic acid 1, ammonia 2, phosphorus 2, lead 5, caustic soda 1, tartar emetic 1, alcohol 4, ether 1, chloroform (during operations) 5, carbolic acid 5, sulphonial 1, morphine, opium, and laudanum 5, strychnine 9, hemlock-water 1, not stated 3, opium or morphine habit 1. It will be seen from this that the number of deaths from what may be called pharmaceutical poisons is remarkably small. We take this to be a tribute to the care exercised by pharmacists and druggists in Ireland in guarding the supply of dangerous poisons.

Mr. Russell's View.

At the last meeting of the Council of Agriculture of the Department of Agriculture and Technical Instruction the Vice-President (Mr. T. W. Russell, M.P.) thus referred to the passing of the Poisons and Pharmacy Act :

A question which has over and over again been the subject of resolutions at the Council-meetings has been brought to a satisfactory conclusion. The Pharmacy Act of last session, during its progress through the House of Lords, was, at the instance of the Department, made to apply to Ireland. A grievance which affected farmers in remote districts has thus been removed. Complaints were repeatedly made, both at this Council and elsewhere, that agriculturists in out-of-the-way places were unable to purchase sheep-dips and other necessities of the kind, unless by travelling twenty or thirty miles to the nearest chemist's shop. The hardship was so real that the law was constantly violated, and these poisonous articles were surreptitiously sold by unauthorised persons. The Pharmacy Act, passed since the last meeting of the Council, empowers the local authorities to licence suitable persons for the sale of sheep-dips and similar commodities, where necessary; and with the placing of this measure upon the Statute-book another of these questions which, with unfailing regularity, occupied the agenda of our proceedings has disappeared.

Scots News.

Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Edinburgh.

The holidays are now in full swing. An English traveller grumbly relates that the answer to a score of calls made during the week was always the same—"The boss is away from home."

Edinburgh licensed victuallers are complaining of the falling-off in consumption of spirits, but chemists have sold larger quantities of saline preparations than usual this summer. One pharmacist, who makes a specially flavoured seidlitz powder, reports a greatly increased sale.

Petroleum Prices.

The Scottish oil companies have decided to reduce the price of petroleum for the winter season by $\frac{1}{2}d.$ per gal., thus bringing the prices to the lowest rate at which they have ever been. With this decision all the principal productions of Scottish companies show a reduction, ammonium sulphate being down 10*s.* per ton, intermediate and heavy oils 1*d.* per gal., and paraffin wax $\frac{1}{2}d.$ per lb. There is also a proposal to establish a central distributing dépôt for all the Scottish companies to oppose the Standard Oil Co., which is distributing American oils by tank street-waggons.

JAPANESE CHEMICALS.—In consideration of a prospective increase of the demand for potassium chlorate and caustic soda in Japan, Mr. K. Okura and a few other business-men in Tokyo have promoted a new factory, to be established at the foot of Mount Fuji, with a capital of 300,000 yen.

French News.

(From the "C. & D." Paris Correspondent.)

PACKING EGGS.—M. Artault has published some results of a research on the bacilli found on hens' eggs. Incidentally he has found that the best packing-material for eggs is shavings of poplar, chestnut, or other light woods.

TRADE NAMES.—The Fourth Chamber of the Paris Law Courts has decided that a pharmacist selling a preparation containing a product known by a special and exclusive name has not the right to use this name on the label. Thus, if he prepares cachets containing Knorr's antipyrin, he cannot label them "Prepared with Knorr's antipyrin."

PRESERVATIVES IN FOOD.—M. Eug. Roux, chief of the Anti-adulteration Service, has issued a circular in which it is stated that the addition to foodstuffs of antisepsics, of whatever nature and in whatever quantity, is dangerous to the public health—*i.e.*, "poisonous" in the sense of the Act of August 1, 1905. The only exceptions are the use of sulphurous acid and bisulphites in limited quantities in the preparation and preservation of wines, beers, and ciders, and for the whitening of dried and preserved fruits.

ARMY PHARMACISTS.—The Minister of War has issued a decree specifying the conditions upon which military pharmacists and surgeons may occupy civil posts in time of peace. Such posts include professorships and assistant professorships in faculties and schools and other establishments for higher education, also positions in Pasteur Institutes. Army pharmacist and surgeon candidates for such posts must obtain the permission of the Minister, and he reserves the right to place on the retired list (*placer "hors cadres"*) any whose university duties prevent them from fulfilling their army work.

HERB TEAS of a purgative or laxative nature are a popular medicine in France; senna, lime-leaves, gentian, couch-grass, etc., being the most usual bases. They have always been looked upon as a treatment which, if not particularly drastic, is usually inoffensive. But Dr. Houssaye reports that he recently treated an old lady and her grandchild who showed grave symptoms of poisoning, and traced the accident to a herb tea containing (besides fennel, lime, senna and elder leaves) broom-flowers. The dangerous species is *Spartium junceum*, as *S. scoparium* contains but little sparteine. It was in all probability the substitution of the former for the latter which led to the accident.

PRESERVING PLANTS.—Professor Guignard, Director of the Paris School of Pharmacy, read a report at the last meeting of the Academy of Medicine on researches made by MM. Perrot and Goris concerning the sterilisation of fresh medicinal plants by a scientific method and their uses for making galenicals. The method of sterilisation is based on the destruction of the ferments, and the plants thus treated retain the colour and taste of fresh plants. The dried plants become a raw material which can be used for preparing galenicals at any time of the year. MM. Perrot and Goris claim that they have obtained physiological vegetable extracts comparable in therapeutic action with the fresh plant.

CO-OPERATIVE MINERAL WATER.—The question of the purchase of a mineral-water spring was discussed at a recent meeting of the Dauphiné Society of Pharmacy. M. Nalpowik, who had been appointed to draw up a report, stated that as a trade society (Syndicat) could not legally carry on trade, it would be desirable to form a special company. Fifteen years ago the Pharmacists' Syndicate of the Loire and Haute-Loire organised a co-operative Association for the sale of medicinal mineral waters, and the Association owns springs at Vals and Vichy, and has regulated the sale of these waters on conditions advantageous to the profession. M. Nalpowik did not advise competing with the existing Association.

INSPECTOR OF NAVAL MEDICINE-CHESTS.—The "sweet little cherub that sits up aloft to watch o'er the life of poor Jack" of the mercantile marine is represented on the Administrative Council of the General Association of French Pharmacists by M. Labussière. He has pointed out at a recent meeting of this body that since the passing of the

Merchant Shipping Act of April 1909 the former system of inspection of medicine-chests by a surgeon, doctor, and pharmacist has been abandoned, and that medicine-chests are now examined by a doctor only. The opinion was expressed that the St. Malo frauds have sufficiently shown how necessary is the presence of a pharmacist at these inspections, and it was determined to approach the Minister of Marine on the matter.

DIAMOND CUT DIAMOND.—The fact of the existence of the regulation in France prohibiting physicians from dispensing or selling drugs or medicines unless there is no pharmacist in the locality sometimes gives rise to disputes between members of the sister professions. Recently a doctor and a pharmacist near a large town in the South of France were at war. Originally there was no pharmacy in the district, and the physician received a subsidy of about 50L a year from the Municipal Council, and sold drugs and medicines to the inhabitants. This went on until a pharmacist set up in business, and the doctor, seeing part of his income threatened, tried to drive him away. But the pharmacist proved to be a fighter, and, after two or three lawsuits, has managed to get the subvention cancelled on the ground that the Municipal Council can no longer legally continue it.

NEW BOOKS.—M. M. P. Carré's work on the "Manufacture of Pharmaceuticals" treats of the methods of manufacture of the principal chemical compounds employed for medicinal purposes, such as chloroform, iodoform, eucodylates, etc., and the methods of extraction of such active principles as quinine and adrenalin. The first volume treats of inorganic, the second of organic substances.—Dr. V. Garde's "Formulary of Pharmaceutical Proprietaries" for 1909 is divided into four parts: (1) An alphabetical list, with composition and doses; (2) a classified list of therapeutic properties and composition; (3) names of makers; (4) alphabetical list of manufacturers' names. — M. H. Jacob's "Examination Manual" for pharmaceutical apprentices about to enter on their scholastic course has been revised according to the 1908 Codex by M. Camille Guillot. The preface has been re-written by M. André Langrand, President of the General Syndicate of Pharmacists of France.

SUGGESTED LEGISLATION.—At the "National Congress of Students" held some time since at Nancy, the students unanimously passed resolutions in favour of:

The abolition of herbalists.

The creation of the "internat" (or house-pharmacist system) at the Nancy hospitals.

The placing of the pharmaceutical student on the same footing as the medical student with regard to military service.

The right of the pharmaceutical student after twelve inscriptions (about three years' study) to manage a pharmacy for at least one month during the absence of the proprietor.

The reduction of the period before a student "plucked" at examinations can be re-examined to one month instead of, as at present, three months for the first failure, six months the second, and nine months the third.

M. Schmidt, who represents the department of the Vosges in the Chamber of Deputies, has been asked to take an early opportunity of drawing the attention of Parliament to these matters.

PATENTS FOR PROCESSES.—The Conseil d'Etat has just given a decision regarding the question of the possibility or legality of taking out French patents for processes employed in manufacturing pharmaceutical preparations. It has long been laid down that the medicament itself—that is, the remedy for human suffering—cannot be patented, but whether the difficulty could not be surmounted by patenting the method of manufacture had so far remained an open question. This particular case dealt with an application for the patenting of a process of manufacture of a fatty substance extracted from bacterial bodies which, it appeared, is suitable for therapeutic use. This process, it was claimed, would produce various remedies according to the nature of the bacteria treated. M. Chardenet, the Government Commissary, objected to any distinction being made between the remedy and the method of its manufacture. To patent the process was tantamount to patenting the remedy itself. The Conseil d'Etat adopted this view, and dismissed the appeal for refusal of patent.

German News.

(From the "C. & D." Correspondent.)

THE LEIPZIG UNIVERSITY has just celebrated the 500th anniversary of its existence, the Jubilee festivities being attended by men of science from every part of the world, even such distant Universities as those of Tokio, Kioto, Pekin, Montreal, and Melbourne sending representatives. Various honorary degrees were accorded in commemoration of the event, among the German men of science so distinguished being Drs. Beckmann and Hantsch, of Leipzig, and Doctor Wallach, of Göttingen.

CONTINENTAL RUBBER GOODS ADVANCED.—At a meeting of German rubber-manufacturers held in Berlin, it was resolved to make the following minimum advance : For all technical soft rubber goods under 3m. per kilo., an increase in price of 10 per cent.; over 3m. and under 12m. per kilo., an increase of 15 per cent.; above 12m. per kilo., an increase of 20 per cent. Surgical articles of soft rubber have also been increased 10 per cent. This increase applies to Germany, Switzerland, Denmark, Norway, and Sweden.

MILITARY PHARMACISTS IN GERMANY.—In consequence of the reforms effected in the salaries of the Imperial officials, the pay of the German military pharmacists has now been slightly altered, these changes taking effect from April 1 of this year. The pay of the military pharmacists and the progressive increase is fixed as follows :—Staff pharmacists, 135*l.*, 165*l.*, 195*l.*, 225*l.*; Corps staff pharmacists and senior staff pharmacists of the naval sanitary districts, 150*l.*, 180*l.*, 210*l.*, 240*l.*, 270*l.*, 300*l.*, 330*l.*, 360*l.*; the senior staff pharmacist attached to the Ministry of War, 300*l.*, 330*l.*, 360*l.*, and an allowance of 30*l.* The housing allowance granted to military pharmacists is the same for all ranks, and varies according to the category of the garrison. For official purposes all German towns are classed in different categories according to the prevailing local cost of living. As far as military pharmacists are concerned the allowances will be as follows : 65*l.*, 46*l.*, 40*l.*, 36*l.*, 31*l.* 10*s.*

AN INTERNATIONAL AERONAUTICS EXHIBITION is being held in Frankfort-on-Main just now, the first ever held. There is little in it, writes a pharmacist who has seen it, which interests pharmacists—*e.g.*, a complete set of chemicals and apparatus for producing hydrogen for filling model airships, which are in the future to rival model yachts. Fellow-pharmacists, please note. There is money in this for you. The German outfit sells at 15*s.* The British flag is much in evidence as a decoration, and it was displayed by a British pharmaceutical firm and the Nugget Polish Co. Pharmacy at the Aeronautics Exhibition is only represented by three firms. The stand of a Frankfort Apotheke—“The Unicorn”—exhibits a few pocket medicine-cases, lemon drops, eau de Cologne, and Papier Poudré. Apparently the care of the complexion looms large on the German mind when ballooning, for the second exhibit is that of “Byrolin,” a well-known German face-cream put up in tubes. The third firm is that of Burroughs Wellcome & Co., which occupies a stand on the gallery in the main building. It is a neat, refined exhibit, and the finish of the medicine pocket-cases and boxes displayed for “motoring and airshipping,” as the simple inscription runs, is a tribute to the manufacturer. The exhibit consists of photographic chemicals in tabloids, tea tabloids, compressed surgical dressings, hazeline (again the complexion—or is it the inevitable bruise?), and various pastilles. The apparently necessary medicine to be provided with when in the clouds would be aromatic ammonia, aspirin, bromine comp., ext. cascar. sag., soda mint, pepsin co., voice tabloids, tinct. opii, and plumb. subacet., besides surgical dressings; another case contained also caron oil. To a German pharmacist it would appear, from a cursory glance, that the gauze used in England has rather wider meshes but is slightly thicker than the German. The German Pharmacopoeia requires a gauze weighing at least 30 grams per square metre, and containing at least twenty-four threads on a square centimetre.

Japanese Jottings.

THE TOKYO CHEMICAL LABORATORY CO., LTD., is the title of a new company organised by pharmacists at Tokyo, with a capital of 100,000 yen.

PATENT-MEDICINE ADVERTISEMENTS in twenty of the principal Japanese newspapers during the first three months of 1909 occupied, in January, 105,008 lines; in February, 108,243 lines; and in March, 126,225 lines; the advertisement-rates, calculated at per line, cost on an average 30 sen.

DRUG RETURNS.—The Tokyo, Osaka, and Yokohama Laboratories examined the following drugs during the first two months of 1909 : Official drugs, poisonous, 28,285 (18 returned as below Pharm. Jap. standard); dangerous, 73,823 (580 returned as unfit); and original packages, 163,605 (3,291 not suitable). The unofficial drugs reported on were, 170 poisonous (3 unfit), and 187 original packages (47 not passed).

CELLULOID MANUFACTURE.—In a year when most items of import showed reductions it is interesting to note that the purchases of celluloid by Japan in 1908 increased from 32,000*l.* to 68,000*l.* Germany was the chief source, the United Kingdom's share being not more than 12,000*l.* This business, however, is not likely to flourish for long, as work has been progressing rapidly at the two large Japanese celluloid factories, and they will probably be in a position to start manufacturing some time this year. One is situated at Sakai and the other at Aboehi, and they are controlled respectively by the wealthy Mitsui and Iwasaki (Mitsubishi) families.

TAXES ON PROPRIETARIES.—The amount collected by the Tokyo Internal Tax Bureau from proprietaries is shown in the table below with the number of proprietaries and also the totals of vending chemists and druggists. The figures relate to the six months from October 1908 to April 1909, and are followed by the corresponding totals in parentheses for the previous six months :

| Provinces | Chemists | Proprietaries | Tax (in Yen) |
|-------------------|---------------|---------------|---------------------------|
| Tokyo | 1,934 (1,884) | 5,918 (5,800) | 126,362,435 (178,051,276) |
| Saitama | 323 (435) | 810 (817) | 3,625,184 (4,475,673) |
| Chiba | 559 (566) | 890 (903) | 5,085,574 (5,491,052) |
| Yamanashi | 250 (254) | 398 (406) | 1,081,096 (1,227,379) |

India and the East.

(From the "C. & D." Correspondent.)

PROSECUTIONS for the illegal possession of morphine by Chinese or the running of a morphine-injecting business are now of frequent occurrence in Singapore, which shows that the authorities are by no means relaxing their efforts. Sentences usually range from two to four months for the latter offence.

PERSONAL.—Mr. J. B. Morris, chemist and optician, of the Colombo Apothecaries' Co., Ltd., and Mrs. Morris returned to Ceylon by the s.s. *Orsova*, after a holiday in England.—Mr. Jas. Shand, chemist and druggist, has arrived in Colombo to take up an appointment with Messrs. Cargills, Ltd., Colombo.

THE OPIUM-TRADE.—It is very difficult (says the “Pioneer”) to explain the fluctuations in the opium trade between India and the Further East. In the year 1908-9 the exports of the drug to China and the Treaty Ports declined by only 2 per cent. in spite of the anti-opium movement, and the value actually rose by nearly ten lacs of rupees. But at the same time the shipments to the Straits Settlements fell off by 16 per cent. in quantity and 21½ lacs in value. The “Pioneer” says that the official conclusion drawn is that the restriction in sales by the Government of India has affected the quantity sent to other countries, for which the Straits Settlements constitute the distributing centre, rather than to China. The course of trade during the current year should show whether this change is likely to be a permanent one.

Australasian News.

The fullest information regarding the Australasian drug-trade and pharmacy is given in "The Chemist and Druggist of Australasia," copies of which can be obtained at 6d. each, post free, from the office of "The Chemist and Druggist," 42 Cannon Street, London, E.C.

The Commonwealth.

ARMY PHARMACISTS.—A deputation from the Pharmaceutical Society of Australasia waited on the Director-General of the Commonwealth Medical Services on June 25, with a view to placing the services of qualified pharmacists at the disposal of the Director, so that they might form part of the Australian Army. The matter was discussed with the Director-General by the members of the deputation—Messrs. Rankin (President), A. R. Bailey (ex-President), and J. C. Pickford (Vice-President). The Director-General expressed himself in accord with the views of the deputation, and promised to bring the matter before the notice of the Minister of Defence at an early date. He was fully in sympathy with the movement, and expressed a high opinion of the value it would be to the medical services in time of emergency to have at disposal a thoroughly competent and highly organised body of pharmacists.

New Zealand.

RECIPROCITY.—A discussion at the meeting of the Central Pharmaceutical Association regarding reciprocity between New Zealand and Australia, though negative, showed that New Zealand opinion is ripening towards reciprocity. The only opposition seems to be based on the view, "I don't see what we are going to gain, though I don't object to the theory." All over Australia it has come to be recognised that to the healthy, well-established man reciprocity is not of practical interest. It is only when health fails and circumstances are adverse that reciprocity becomes a boon. Are the healthy and the well-established going to deny this boon to those who need it?

South Australia.

FOOD AND DRUGS ACT.—This Act came into force on June 1. On June 2 Mr. Percival Robinson was appointed Chief Inspector, and on June 9 the Advisory Committee was appointed. Of the committee of seven, four seats are specially provided for in the Act, the other three members being representatives of the several industries likely to be affected by the Act: William Ramsay Smith, D.Sc., M.D., Chairman Central Board of Health; Edward H. Rennie, M.A., D.Sc., Professor of Chemistry Adelaide University; William A. Hargreaves, M.A., F.I.C., Government Analyst; Thomas Borthwick, M.B., Officer of Health, City of Adelaide; James W. Grasby, grocer; John White, chemist and druggist; John Williams, aerated-water manufacturer. The committee may make regulations prescribing such things as are necessary for the purposes following:

Inspection and analysis of drugs, chemicals, patent medicines, and proprietary articles.

Regulating and fixing the standards of food and drugs, and of the several ingredients of such.

Prescribing what substances and what quantities of the same when added to articles of food and drug renders such injurious to health.

Prohibiting the sale and providing for the destruction of such drugs, chemicals, and articles of food as are injurious or not in accordance with the regulations.

Publishing reports of analyses of foods and drugs made by the Government Analyst, the names and addresses of the sellers and the prices at which they were sold.

Regulating and fixing the wording, lettering, and other contents of labels on any articles of food and drugs, patent and proprietary medicines.

The regulation and restriction and conditions of the sale of poisons.

Fixing rates for payment for samples required to be purchased by the inspectors.

Prohibiting the use of specified substances or methods of catching, feeding, or drugging of animals shortly before being killed for sale as food.

Victoria.

THE PHOSFERINE TRADE-MARK came before the Registrar of Trade-marks on June 8. Messrs. Ashton & Parsons, Ltd.,

had made an application for its registration, but Messrs. Gould & Co. lodged an opposition on the ground that "honest concurrent user" had been established. The Registrar held that this was not established, and the opposition was disallowed.

A CHEMISTS' WINDOW-DRESSING COMPETITION is being organised by the Victorian Chamber of Manufactures for the district included in the radius of five miles from the Melbourne General Post Office. The windows are to be dressed for Agricultural Show week at the beginning of September, and prizes will be offered by manufacturers for windows dressed with goods of Australian manufacture. The award will be made by points, as follows: (a) Purely Australian nature of the goods shown (50); (b) attractiveness from the purchasing public's point of view (30); (c) originality of design (20); (d) variety of goods displayed (25).

POISON ACT PENALTIES.—The small penalties imposed by Magistrates on breaches of the Poisons Act was the subject of a letter from the Pharmacy Board to the Victorian Board of Public Health. Mr. H. W. Shillinglaw, Registrar of the Pharmacy Board, states that "although the evidence in the cases which have been disposed of was furnished by the officers of your department, the carrying-out of the prosecutions has entailed a loss to the Board, and in no case do the costs awarded by the Court cover the legal expenses." The members of the Board of Health are dissatisfied with the low penalties, and are to discuss the possibility of securing some further safeguards in the interests of the public.

THE NEW CHAIRMAN of the Board of Public Health is Dr. B. Burnett Ham, who in 1900 was appointed Commissioner of Public Health for Queensland, and in 1901 inaugurated the Department of Public Health. From the point of view of pharmacists, the most significant part of his work in Queensland has been the way in which he has secured the entire support and co-operation of the manufacturers, importers, and retailers of foods, drinks, and medicines. Instead of adopting an autocratic method, he invited the grocers to meet him, and then demonstrated to them the class of adulteration that was being practised, and showed what could be done to stop it. Dr. Ham was present at the dinner of the Australasian Pharmaceutical Conference in January.

PURE FOOD ACT CASES.—Messrs. J. K. Blogg & Co. were prosecuted on June 17 for having sold "egg-powder" which was only baking-powder and contained no eggs, and was coloured with aniline dye. Defendants stated that it was called "substitute for egg-powder." The Police Magistrate held that the defendants had done all in their power to make it clear that the preparation did not contain any egg ingredient, and the case was dismissed, with costs. The same firm were fined 10*l.*, with five guineas costs, for selling as salad oil a mixture of whale oil and vegetable oil. A stay of proceedings for fourteen days was granted.—On June 24 at North Melbourne, before Justices of the Peace, Mr. John Martin, chemist, 7 Victoria Street, was prosecuted for selling an article of food under the name of "yolk yellow," which was composed of starch, sugar, and a little colouring matter, probably saffron, and harmless. The defence was that there was no deception, and the label stated that it was a "substitute for eggs." Defendant was fined 5*s.*, with two guineas costs.

Western Australia.

DR. ANTON BREINL, of the Liverpool School of Tropical Medicine, has been appointed director of the newly founded School of Tropical Medicine in Western Australia. Dr. Breinl was for many years first assistant to Professor Chiara in Prague. He joined the Liverpool School of Tropical Medicine in 1904, and shortly afterwards was appointed a member of the school's yellow fever expedition to Manaos, where, during his investigations, he and his colleagues both contracted yellow fever, and Dr. Breinl, after a severe illness, was invalided home to England. He is chiefly known for his researches on sleeping-sickness, and for his valuable contribution with Dr. Thomas to the therapeutics of that disease.

Cape Analyst's Report.

THE report for 1908 of Mr. Chas. F. Juritz, M.A., D.Sc., F.I.C., Senior Analyst to the Government of Cape Colony, which has just been issued, deals with a large variety of subjects which came under his notice during the year. In spite of the commercial depression prevailing in 1908, it appears the work of the laboratories is still increasing, due in part to the recent legislation in regard to spirituous liquors and vinegar, and in part to augmented activity in mineral work, chiefly platinum. The total number of samples analysed was 3,713, of which 2,191 samples were taken under the Food and Drugs Act, and of these 256 were found to be adulterated. These included eight samples of Cayenne pepper imported from abroad, and in each case some adulteration was found, the adulterant being principally ginger or turmeric. Of vinegar 105 samples were examined, of which 50 were adulterated, and many of them were of very inferior quality, being more or less turbid in appearance. All the evidence goes to show that sufficient care is not taken to manufacture a high-grade article, and a considerable improvement will have to take place before the wine-vinegar industry will be able to compete with imported vinegar. A sample of "vinegar essence" stopped at the Customs was found to contain 61 per cent. of acetic acid. One hundred parts of an "essence" such as this would, if simply diluted with water, make 1,015 parts of artificial vinegar of 6 per cent. strength. In former years "Colonial product" used to be claimed on behalf of articles thus made up; in fact, during the year under review such mixtures have been sold under the label "Colonial vinegar." It says much for the condition of pharmacy that although 4 samples of compound camphor liniment, 4 of soap liniment, 3 of belladonna liniment, 2 of cream of tartar, 3 of tartaric acid, and 4 of turmeric were examined, they were all pronounced pure. Among the agricultural analyses were twenty cattle and sheep dips, of which the following are noted :

Sanitas Creocide Sheep Dip was found to be composed as follows:

| | | | |
|-------------------------|-----|------|-----------|
| Water | ... | 20.0 | per cent. |
| Oils containing phenols | ... | 61.0 | " |
| Whereof phenols made up | ... | 9.5 | " |

The remainder of the dip consisted of substances intended to produce an emulsion when the dip is mixed with water. Three samples of *Laidlaw's Extract of Pure Tobacco* were found to contain respectively 3.75, 5.75, and 6.75 per cent. of nicotine. The physical condition of these samples differed as much as their nicotine-content. The first was so thick that it refused to flow; the third flowed easily, like thin treacle; the second was intermediate in viscosity. In these dips the nicotine-content seems to vary inversely as the viscosity. Two samples of the same brand analysed subsequently contained 7.79 and 7.95 per cent. of nicotine.

Biggs' Fluid Glenovis Dip consisted of—

| | | | |
|---------|-----|------|-----------|
| Phenols | ... | 24.5 | per cent. |
| Oils | ... | 62.0 | " |
| Water | ... | 8.0 | " |

The remainder comprised soaps and other materials necessary to secure an emulsion with water.

Glenovis Powder Dip contained—

| | | | |
|--------------------------------|-----|-------|-----------|
| Arsenous sulphide | ... | 6.12 | per cent. |
| Free sulphur | ... | 33.25 | " |
| Total arsenic, calculated as | | | |
| As ₂ O ₃ | ... | 17.90 | " |

| | | | |
|---------------|-----|-------|---|
| Total sulphur | ... | 71.40 | " |
|---------------|-----|-------|---|

An interesting note is given in regard to an analysis of Colonial eucalyptus oil, which was found to have a sp. gr. of 0.923, a specific rotatory power of +6°, the cineol and phellandrene tests being "normal." As usual, several so-called "medicines" employed as intoxicants received attention, owing to the fact that they were being largely sold by general dealers. These consisted of "Hoffmann's Druppels," "Roode Lavendel," and "Jamaica Gember." The Hoffmann's druppels each contained 14 per cent. of ether, and their alcoholic strength was 32 and 33 degrees under proof. The other two medicines contained alcohol to the extent of 27 and 60 degrees over proof, respectively. As a result of the legal proceedings which followed, the dealer was fined 20*l.*, but the sentence was quashed on appeal; so the matter was taken up in Parliament, the outcome being "The Intoxicating Medicines Sales Act" of 1908.

The Australian Formulary.

AT meetings of the Formulary Committee of the Queensland Pharmaceutical Council on June 9 and 23, the following recipes were submitted for inclusion in the Australian Formulary :

LIQUOR PICIS.

| | | |
|-------------------|-----|-------------------------|
| Prepared coal-tar | ... | 4 oz. (200 grams) |
| Resin | ... | 13 oz. (86 grams) |
| Sodium hydroxide | | 132 grains (14.5 grams) |
| Distilled water | ... | a sufficient quantity |

Boil gently the tar, resin, and sodium hydroxide with 1 pint (1,000 c.c.) of the water, for half an hour; cool, pour off the liquid from the tar, and make it up to 1 pint (1,000 c.c.) by the addition of distilled water.

PASTA HAMAMELIDIS.

| | | |
|-------------------------|-----|------------------|
| Stearic acid | ... | 10.0 |
| Sodium carbonate | ... | 5.0 |
| Glycerin | ... | 5.0 |
| Solution of hamamelis | ... | 50.0 (by weight) |
| Distilled water to make | ... | 100.0 |

Melt the stearic acid on a water-bath, add the sodium carbonate and glycerin dissolved in 35 of hot water, and continue the application of heat, with constant stirring, until chemical action has ceased. Remove from the heat, make up the weight to 50 with distilled water, add 50 (by weight) of solution of hamamelis, heat for a moment until it is uniformly blended, stir until smooth, then transfer to a warm mortar and beat to a foam.

ELIXIR GENTIANÆ ACIDUM.

| | | |
|--------------------------------|-----|------------|
| Dilute nitro-hydrochloric acid | ... | 10 minims |
| Tincture of nux vomica | ... | 5 minims |
| Compound tincture of gentian | ... | 30 minims |
| Simple elixir to make | ... | 120 minims |

Mix.

UNGUENTUM MENTHOLIS COMPOSITUM.

(*Syn.* Analgesic Cream.)

| | | |
|-----------------------------|-----|------------|
| Chloral hydrate | ... | 40 grains |
| Menthol | ... | 80 grains |
| Oil of wintergreen | ... | 180 minims |
| Hydrous wool-fat | ... | 2 oz. |
| White soft paraffin to make | ... | 4 oz. |

Dissolve the chloral and menthol in the oil of wintergreen, and mix with the hydrous wool-fat and soft paraffin previously melted with gentle heat, and stir until cool.

EMULSIO PETROLEI CUM HYPOPHOSPHITIBUS.

| | | |
|------------------------|-----|------------|
| Paraffini liquidi | ... | 8 oz. |
| Pulv. gum. acaciae | ... | 4 oz. |
| Ol. cinnamomi | ... | 24 minims |
| Pulv. tragacanth. | ... | 120 grains |
| Calcii hypophosph. | ... | 192 grains |
| Sodii hypophosph. | ... | 192 grains |
| Aq. dest. | ... | 4 oz. |
| Elixir glusidi | ... | 105 minims |
| Vini (Chablis) q.s. ad | ... | 24 oz. |

Mix in a mortar liquid paraffin, gum acacia, cinnamon oil, and tragacanth. Add in one quantity 6 oz. of Chablis and emulsify completely; add calcium hypophosphate and sodium hypophosphite dissolved in 4 oz. of distilled water, then add the elixir glusidi, and finally sufficient Chablis to produce 24 oz.

Contains 33 per cent. of liquid paraffin and about 40 per cent. of Chablis.

PAROGEN.

The published formula for parogen leaves considerable room for improvement, chiefly owing to the difficulty in obtaining alcoholic ammonia in Australia of a reasonably uniform strength. Further, this preparation is one seldom used in pharmacy, and is not usually to be found in the stock of Australian pharmacists.

The substitution of liq. ammon. fort. for alcoholic ammonia admits of a perfectly stable preparation being made in a few minutes. The following formula is recommended. The preparation is not absolutely neutral, but this is an advantage rather than otherwise :

| | | |
|-------------------|-----|------------|
| Acid. oleic | ... | 4 fl. oz. |
| Paraffin liq. | ... | 4 fl. oz. |
| Alcohol. absolut. | ... | 2 fl. oz. |
| Liq. ammon. fort. | ... | 168 minims |

Mix the paraffin and alcohol, add the ammonia, shake vigorously and add oleic acid, continuing the agitation for several minutes.

Agri-Horticultural Poisons.

Notices of Application

for licences under Section 2 of the Poisons and Pharmacy Act have been lodged with the local authorities named.

DONCASTER.—W. E. Cox, Ltd., seedsmen, etc., 24 The Sepulchre Gate.

STONROW.—Wm. Mackenzie (Jas. Mackenzie & Sons), 23 Cromwell Street.

Consideration of Applications.

BUCKINGHAMSHIRE.—The General Purposes Committee reported to the County Council that the application of Mr. T. H. Tailby, nurseryman, Buckingham, had been adjourned for further consideration, owing to several objections having been received.

LEICESTERSHIRE.—The Executive Committee reported to the County Council on August 11 that they had considered a memorial from the chemists of Ashby-de-la-Zouch and district asking for the refusal of applications. The committee stated that they were quite aware that every reasonable facility was afforded by the qualified chemists in the district referred to, to satisfy the public requirements, but as the committee must, with regard to the sale of poisonous substances for use exclusively in horticulture, give the preference to nurserymen, etc., they could not accede to the request of the memorialists, but were willing to consider carefully any objections from existing vendors. The report was adopted without comment.

MIDDLESBROUGH.—Mr. W. T. Coltman, Secretary of the Teesside Chemists' Association, has written to the Town Council protesting against the recommendation of the General Purposes Committee to grant the application of Messrs. Strike, Ltd. He complained that the committee had not complied with the provisions of the Act in several ways. The Council on August 4 decided to refer the matter back to the committee for further consideration.

WARRINGTON.—The licence question was the subject of a long discussion by the Town Council on August 12.—Alderman James Evans said the Health Committee, in recommending the refusal of the licences for a second time (*C. & D.*, July 17), were satisfied that ample provision had already been made for the sale of dips and weed-killers.—On a division the matter was again referred back to the committee by twelve votes to seven. The committee subsequently decided to recommend the issue of licences to the two applicants, with the exception that the licences should not cover the sale of arsenical dips.

Applications Granted.

LEAMINGTON.—The Town Council on August 9 granted the applications of Mr. Geo. Littlewood (Leamington Nurserymen and Florists, Ltd.), 46 Bedford Street, and Wm. Harper, seedsmen, 104 Warwick Street, on the recommendation of the Watch Committee.—During the discussion no definite reply was given to a query by Mr. J. Smith whether assistants would be allowed to sell the poisons.—Alderman T. W. Thursfield thought the licences had been granted under some misapprehension.

TRURO.—Hosken, Trevethick, Polkinhorn & Co., agricultural merchants. The Watch Committee failed to make any recommendation regarding the application, which had been referred back for further consideration. The Mayor stated that the applicants would give a written undertaking "to sell only sheep-dip and weed-killer, as they had done for years."

Applications Refused.

MANSFIELD.—T. Hancock, seedsmen, 34 Leeming Street. The local Association opposed the application.

Fees Fixed.

BRADFORD.—Licence, 2s. 6d.

BUCKINGHAMSHIRE.—Licence, 10s. 6d. Renewal, 1s. 6d. Inspection of register, 1s. Copies from register, 4d. per folio of seventy-two words.

GIRVAN.—Licence, 10s. 6d. Renewal, 1s. 6d.

LEAMINGTON.—Licence, 10s. 6d. Renewal, 1s. 6d.

WHITEHAVEN.—Licence, 10s. 6d. Renewal, 1s. 6d.

Interesting Items.

The "Somerset County Gazette" of August 7 "cordially endorses" the opinion of the Taunton Medical Officer (Dr. H. J. Alford) that ample facilities exist at the present for the sale of poisons. The comment states that the Council were fully justified in refusing the applications, the question being not one of merit, but of facility.

The Chairman of the Belford Rural District Council (Mr. G. D. A. Clark) complains that the County Council demands the payment of 2s. 6d. as stamp-duty, in addition to the fee

of 7s. 6d. for each licence. He considers that the County Council has no power to enforce such a payment.

During the quarterly meeting of the Hants County Council, Colonel A. O. Grimston, in referring to poison-licences, said that the committee entrusted to deal with the matter had taken as favourable a view as they could, but it was found that in nearly every case the public needs were already satisfied in the applicant's neighbourhood. It was found necessary to issue only one licence (*C. & D.*, August 14).

Prescription Problem.

THERE has been an excellent response to the prescription-reading competition which appeared in our Jubilee Issue. The number of postcards received showed the interest that is taken in deciphering an ambiguous script which might have been presented at the pharmacy of any of our subscribers. The following is the correct transcription of the script :

| | |
|--------------------------|---------------------|
| Homatropin hydrobromatis | ... g $\frac{1}{4}$ |
| Liq adrenalin chl | ... m.v. |
| Cocaina hydrochlor | ... gij. |
| Aqua dest ad | ... sj. |
| Ft. guttæ et signa. | |

Two drops to be applied to the eye every third hour.

The large number of replies received has made the work of checking more than usually difficult. This has been due chiefly to the fact that the faults in most cases are slight. Very few competitors misread the ingredients. The errors were chiefly in regard to the salt of homatropine, the hydrochloride being what some made out as the first ingredient. Two competitors, whose cards we can hardly take seriously, read the first line as "Konali pur hydrobromitis" and "Hydr. ammoniat." In one case the cocaine was stated to be eucaine. The directions were a stumbling-block to several people, "Five drops," "Few drops," and "The drops" being sent in place of "Two drops." There were a few other points upon which it was possible to make incorrect readings. No competitor has sent in a faultless rendering, but to the following we have awarded a copy of the "Chemist's Medical Dictionary," the cards sent in by these competitors containing only one error :

Mr. A. F. Anderberg, 186 Lavender Hill, London, S.W.
Mr. Wm. Duncan, 52 Shaftesbury Road, Hornsey Rise, London, N.

Mr. J. Furber, Medical Hall, Swanscombe, Kent.

Mr. Fred. Greasley, 73 Newborough, Scarborough.

Mr. A. H. Hirt, 26A Elm Grove, Southsea.

Mr. T. M. Lloyd, 203 Edge Lane, Liverpool.

Mr. J. W. Tippett, 18 Eccleston Street, Belgravia, London, S.W.

Mr. H. K. Woodward, Bull Green and George Street, Halifax.

The next problem is as follows :

unction ave
bigr. am and
17
Wig. dandr 10g
(3) Wig. Vln. Wp
Benz. Olate & mdu
inf. wright for 2g
unctus i y-gran

Postcard replies will be received up to August 25.

Births.

FERRIER.—At Kersefield, Talbot Street, Grangemouth, on August 11, the wife of James Ferrier, pharmacist, of a son.

WYATT.—At Bootle, Liverpool, on August 9, the wife of Harold Wyatt, pharmaceutical chemist, of a son.

Deaths.

FINEGAN.—At Alma Cottage, Agincourt Avenue, Belfast, on August 8, Annie Marie, wife of Mr. Thos. Finegan, pharmaceutical chemist, The Avenue Pharmacy, 120 Royal Avenue, Belfast. The funeral took place on August 10 at Milltown Roman Catholic Cemetery.

GORDON.—On July 26, at Bangalore, Mr. Robert Gordon, chemist and druggist, manager of Messrs. Miller & Co., Kandy, Ceylon. Mr. Gordon was ill for some time with an affection of the kidneys, and left for Bangalore about a month ago to recruit. On the previous Saturday a telegram was received in Colombo announcing his serious illness and removal to hospital from the hotel where he was staying with Mrs. Gordon. The deceased, who was about fifty years of age, went to Ceylon thirteen years ago as chief chemist of Messrs. Miller & Co., Kandy. On the death of Mr. Way he succeeded to the management, in which office he came into contact with a large number of planters, who will hear of his death with keen regret. Mr. Gordon was very popular and was held in the highest esteem by all who knew him. Much sympathy is felt with Mrs. Gordon and her two children.

LANE.—At Oamaru, New Zealand, on June 16, Mr. E. G. Lane, chemist, aged eighty-three. Mr. Lane was born in England, and went to Victoria in 1851. After some years he crossed to New Zealand, and carried on business at Port Chalmers, Waikouaiti, and Dunedin. In 1868 he opened a business in Oamaru. Mr. Edward Lane, chemist, Oamaru, is his son.

MELHUISH.—At Nowra, N.S.W., on May 23, from concussion of the brain, Mr. Thomas Boucher Melhuish, chemist and druggist, aged fifty-seven. Mr. Melhuish was born at Taunton, Somerset, and was apprenticed to his father. Subsequently he was with Messrs. Hopkin & Williams and Mr. Martindale, London. After passing the Minor in 1870, he obtained experience in Paris, Rome, Nice, Baden-Baden, and Heidelberg. In 1879 he went to Port Elizabeth, Cape Colony, and in 1881 to Melbourne, Adelaide, and Sydney. He was President of the Pharmaceutical Society of New South Wales in 1889.

PAGET.—At his residence in Victoria Street, Loughborough, on August 15, Mr. John Paget, pharmaceutical chemist, aged seventy. Mr. Paget retired just over twenty years ago from the chemist's business in Church Gate, Loughborough, to take more active interest in stockbroking. He did not take a leading part in public affairs, but served on the old Local Board, the Free Library Committee, and the Committee of Management of the Hospital and Dispensary.

PURVES.—At Edinburgh, on August 14, Mr. Samuel Purves, chemist and druggist, formerly in business at 48 Haymarket Terrace, Edinburgh, aged sixty-six. Mr. Purves retired in 1904, thirty years after he started in business for himself; Mr. Robert Henderson, chemist and druggist, succeeding him. The deceased gentleman is survived by a widow, one son, and one daughter.

REES.—At 6 Church Street, Merthyr Tydfil, on August 12, Mr. John Rees, chemist and druggist, formerly in business at 21 Cowbridge Road, Cardiff. Mr. Rees had lived in retirement for some years, and before removing to Cowbridge Street he traded in Bute Street for about twenty years.

SIMCOX.—At Shirley, Southampton, on July 27, Mr. Edward Simcox, chemist and druggist, aged seventy-six.

STEWART.—At Baycliffe, 101 Joppa Road, Portobello, on July 11, Mrs. Elizabeth F. Armstrong, wife of Mr. James Stewart, pharmaceutical chemist, formerly of Dalkeith, aged sixty-six.

THOMSON.—Mr. Archibald Thomson, chemist and druggist, Northgate Street, Chester, whose death took place

at Hoylake (see *C. & D.*, August 7, p. 256), was a native of Lockerbie, and served his apprenticeship in that town. After being at Preston a short time, he entered the service of Messrs. Davies & Shepheard, Chester, with whom he remained for about nine years. He then took over the business in Northgate Street, formerly carried on by Mr. Hincks. During the last twelve months deceased had been in failing health, and for two months he had been staying at Hoylake.

Personalities.

MR. G. WOODHOUSE, chemist and druggist, Ludlow, has decided to present a drinking fountain to the town as a memento of his two years' Mayoralty.

MR. W. E. HORROCKS, chemist and druggist, Knutsford, has been appointed on the local committee which is endeavouring to secure the more uniform closing of shops.

MR. N. F. GRAHAM, son of Mr. F. A. Graham, pharmacist, Bournemouth, was successful in passing the Intermediate M.B., B.S. examination of the University of London, held last month.

MR. E. S. FRANCIS, chemist and druggist, writing to us on August 16, informs us that he has taken over the duties of Hon. General Secretary of the National Union of Assistant Pharmacists. Mr. Francis's address is 50 Grange Road, King's Heath, Birmingham.

THE MOXON MEDAL, founded in 1890 in memory of Dr. Walter Moxon, has been awarded to Sir William R. Gowers, M.D., F.R.S., by the Royal College of Physicians. The medal is awarded every three years to the person who is deemed to have most distinguished himself by observation and research in clinical medicine. The College has also awarded the Baly Medal, founded by Dr. F. D. Dyster, in 1866, in memory of Dr. Gulielmi Baly, to Emil Fischer, Ph.D., F.R.S., Professor of Chemistry in the University of Berlin since 1892. Professor Fischer has gained the award, which is made every alternate year, by "being deemed to have most distinguished himself in the science of physiology."

Recent Wills.

The dates in parentheses refer to the issues of "The Chemist and Druggist" in which the deaths of the testators were reported.

MR. THOMAS LAND BROWN, Market Square, Buckingham, chemist and druggist, left estate of the gross value of 3,788*l.*, with net personality 566*l.* (*C. & D.*, July 17, p. 91).

MR. HERBERT JOHN WILLOWS, Fairfield, The Limes Avenue, New Southgate, left estate valued at 3,365*l.* 14s. 8d. gross, of which 3,046*l.* 7s. 5d. is net personality (*C. & D.*, July 24, p. 113).

Information Wanted.

Inquiries for the names and addresses of manufacturers, or other trade information, not traceable by reference to the advertisement-pages of "The Chemist and Druggist" and the "C. & D. Diary," or not filed in our private register, are inserted here free of charge. Postcard or other replies to any of the subjoined inquiries (addressed to the Editor "The Chemist and Druggist," 42 Cannon Street, London, E.C.) will be esteemed.

- 135/15. Who can supply caoutchoucine?
- 135/60. Where can Eulaxans be obtained?
- 131/21. Makers of 2*d.* astringent pencils, for use after shaving.
- 137/42. Manufacturers of red terra-cotta honey-pots, glazed inside.
- 141/4. British agents for Actina, an American cure for defective sight.
- 139/18. Makers of clinical thermometers branded "Crossley Sanatorium model."
- 136/32. Makers of Ariane, a kind of elastic stockings which are laced and can be washed.
- 137/18. Present address of maker of Grave's dog-pills, formerly at Kentish Town and Camden Town.
- 138/3. Name and address of makers or importers of metal milking tubes, $\frac{1}{8}$ to $\frac{3}{32}$ in. diameter and 4 to 5 in. long.

Legal Reports.

Trade Law.

Hair-dye Case.—The defendant in this case (see *C. & D.*, August 7, p. 254) applied to the Judge on August 6 for an order allowing him to pay by instalments the damages awarded. The decision of the Judge was adjourned to enable defendant to give notice to the plaintiff.

Merchandise-marks Act.

BEECHAM'S PILLS.

At Belfast on August 13, Wm. Kidd, Primitive Street, was summoned for having applied a false trade description to Beecham's pills. A second summons charged him with selling pills to which a false trade description had been applied. Before the case was gone into, Mr. N. Tughan, on behalf of the defendant, pleaded guilty and agreed to a penalty similar to that inflicted in a case last week (*C. & D.*, August 14, p. 284). The defendant was willing to give any assistance in bringing the perpetrators of the fraud to justice. On behalf of Messrs. Beecham Mr. McCutcheon (solicitor) assented to the course followed, and defendant was accordingly fined 2s. 6d., with 20s. costs, on the first summons, the second being withdrawn.

Deed of Arrangement.

HODGSON, PETER, trading as Hodgson & Co., Ormsgill and Preston Street, and residing at 80 Hawcoat Lane, Barrow-in-Furness, Soap, Candle, and Chemical Manufacturer. Trustee, J. Todd, 3 Winckley Square, Preston, C.A. Dated August 10; filed August 16. Secured creditors, 8,883/-; liabilities unsecured, 6,738/-; estimated net assets, 2,861/. Among the creditors are: J. Riley & Sons, Hapton, near Accrington (24/-); Anglo-American Oil Co., Manchester (206/-); United Alkali Co., Widnes (32/-).

Gazette.

Partnerships Dissolved.

BROOKS, R., and SAUNDERS, W. L. K., manufacturing chemists, etc., Hulme, Manchester, under the style of Keith, Saunders & Co.

HENRY, G. G. W., and SANGUINETTI, H. H., physicians and surgeons, Minehead, Somerset, under the style of Henry & Sanguinetti.

New Companies and Company News.

The letters P.C. mean Private Company within the meaning of the Companies Act, 1907, and R.O., Registered Office.

SCHOOL HYGIENE PUBLICATIONS CO., LTD. (P.C.).—Capital 1,000/-, in 1/- shares. Objects: To carry on the business of publishers of the "Journal of School Hygiene." The first subscribers are H. Deane, 205 Strand, W.C., solicitor, and M. D. Eder, 2 Charlotte Street, W., physician. R.O., 2 Charlotte Street, Fitzroy Square, London, W.

EASTERN PETROLEUM CO., LTD.—Capital 60,000/-, in 1/- shares. Objects: To acquire, deal with, and turn to account any petroleum or oil-bearing lands in Egypt or elsewhere, to adopt an agreement with the Jemsah Syndicate, Ltd., and to carry on the business of refiners of and dealers in petroleum and other mineral oils and the products thereof, mincowers, carriers, wharfingers, shipowners, etc. The first directors are A. H. Bonnard and T. W. Cave.

VIVO VIBRATOR CO., LTD. (P.C.).—Capital 1,000/-, in 5s. shares. Objects: To adopt an agreement with G. L. Hogan, J. W. Walker, jun., and Sir Edward Sullivan, Bart., and to carry on the business relating to massage treatment, also as chemists, druggists, manufacturers of electrical and other scientific apparatus, etc. The first subscribers are C. W. Whitham, 7 Beauvale Road, Dulwich, and W. G. Wilson, The Chilterns, New Malden, Surrey. R.O., 329 High Holborn, London, W.C.

MILTON APOTHECARIES CO., LTD. (P.C.).—Registered in Edinburgh. Capital 500/-, in 1/- shares, to acquire and carry on the business of dispensing chemist and druggist carried on by W. G. Dunn at 38 Milton Street and 31 Maitland Street, Glasgow, as the Milton Apothecaries' Hall. The first subscribers are W. G. Dunn, 38 Milton Street, Glasgow, chemist's assistant; W. Fraser, 38 Carnarvon Street, Glasgow, pharmacist; and J. Crandles, 72 Hamilton Road, Rutherglen, clerk. The first directors are W. G. Dunn, W. Fraser, and J. Crandles. R.O., 38 Milton Street, Glasgow.

C. E. HARRODS, LTD. (P.C.).—Capital 500/-, in 1/- shares. Objects: To acquire from the liquidator of Bambridge, Ltd. the business carried on at 207 New King's Road, Parsons Green, S.W., and to carry on the business of chemists, druggists, mineral-water manufacturers, opticians, etc. The subscribers are C. E. Harrod, 207 New King's Road, Parsons Green, S.W., drug-merchant, and A. G. Doble, 207 New King's Road, Parsons Green, S.W., chemist and druggist. The first directors are C. E. Harrod and A. G. Doble. R.O., 207 New King's Road, Parsons Green, London, S.W.

ANGLO-FRENCH CHEMICAL-WORKS, LTD.—Capital 100,000/-, in 1/- shares. Objects: To acquire the benefit of certain existing inventions relating to the treatment of chemicals and the production of chemical compounds, and to carry on the business of manufacturers of, agents for, and dealers in chemicals of all kinds. The first subscribers are: A. H. Crew, 3 Grimwood Road, Twickenham, S.W.; D. B. Gardiner, 8 Melrose Gardens, West Kensington Park, W.; A. W. Perry, 30 St. Martin's Court, W.C.; S. W. Digby, 26 Lombard Street, E.C.; J. Montaigne, 71 Ormiston Road, Shepherd's Bush, W.; J. W. Clements, 9 Pyrmont Grove, West Norwood, S.E.; and D. Kimber, 3 and 4 Great Winchester Street, E.C. Minimum cash subscription, 20 per cent. of the shares offered to the public. The first directors are Major-General Sir John Campbell, Bart., C.B., 22 Royal Crescent, W.; Major-General Sir Norman R. Stewart, Bart., C.B., 50 Birch Grove, Acton, W.; E. Peters, Broad Street House, E.C.; J. Hancart and L. Lecomte, R.O., Broad Street House, New Broad Street, London, E.C.

J. & J. CUNNINGHAM, LTD., chemical-manufacturers, Leith.—The directors' report recommends a dividend of 5 per cent., free of income-tax, on the ordinary shares, and that the sum of 2,963/- be taken from works-reserve for the renewal of sulphuric-acid plant, leaving a balance of 16,213/- to be carried forward.

ANGLO-FRENCH CHEMICAL-WORKS, LTD.—This company, referred to above, has for its object the purchase of the factory and business of the Société Anonyme Le Blane Ardennais, situated at Vireux, Ardennes, France, and the establishment of a factory in England for the manufacture and sale of chemical products, especially of lithopone.

GERMAN CHEMICAL COMPANIES.—At the meeting of the J. D. Riedel Co., held in Berlin, it was stated that it had been decided not to go on with the scheme for building a factory in England, but that arrangements had been made for granting licences to an English concern for manufacturing their patented pharmaceutical products there.—The Chemische Fabrik von Heyden, Radebeul, near Dresden, are increasing their capital by one million marks for the purpose of enlarging their artificial indigo and other plants.—The German Solvay Works are contemplating a large increase of capital owing to important extensions they have on hand.—The Chemical Industries Co., Gelsenkirchen, Schalke, are increasing their capital from two to four million marks.—The Nitrifabrik, Nöpenick, near Berlin, made a net profit of 279,903m., against 352,165m. last year, and are again paying 16 per cent. The company's chief article is formic acid, and the method worked out by them a few years ago of manufacturing this by the absorption of flue gases by fused caustic alkali and subsequent distillation with sulphuric acid has quite displaced the old process of heating together oxalic acid and glycerin, and made formic acid a cheap commercial product.

MORTGAGES AND CHARGES.—The following particulars have been filed at Somerset House: *Californian Petroleum Refineries, Ltd.* Mortgage on certain land in San Luis, Obispo, California, to secure \$112,500.—*Direct Supply Aerated Water Co., Ltd.* Trust deed to secure 25,000/- debentures; also deed to secure payment of 1/- 5s per debenture on redemption or repayment on an issue of 25,000/-; also land registry charge on freehold land and premises at 135 and 137 Fulham Palace Road, S.W., as collateral security.—*Electrolytic Alkali Co., Ltd.*, 50,000/- first mortgage debentures created July 12; present issue, 40,150/-.—*Rational Remedies, Ltd.* 1,000/- debentures created July 29, the present issue being 500/-.

RECEIVERS AND MANAGERS APPOINTED.—*Emmotland Chemical Works Co., Ltd.* A. N. Lewendon, 4 Parliament Street, Hull.

Westminster Wisdom.

A Record of Parliamentary Progress.

SPIRIT-TAX YIELD.

Mr. Joynson-Hicks asked the Chancellor of the Exchequer, in the House on August 18, whether the increased spirit-duty of 3s. 9d. on 24,600,000 gals., the amount upon which the Government now estimated such duty would be paid, would amount to 4,612,500l.; and, if so, whether he could see his way to revise his estimate of 1,600,000l. as the amount to be received from such increased tax.—Replying for the Chancellor, Mr. Hobhouse said it was true that an additional tax of 3s. 9d. a gallon on the quantity of spirits estimated to be cleared at the new rate of duty during the current financial year would amount to 4,612,500l. His right honourable friend saw no reason to modify his estimate of the additional revenue to be obtained this year by increasing the duty by 3s. 9d.

MEDICINAL WINES.

According to the announcement in Parliament, no further progress will be made with the Finance Bill until the first week in September, when the licensing clauses will come up for consideration. It has been decided that this part of the Bill shall be directed by the Prime Minister with the assistance of the Solicitor-General and Mr. Herbert Samuel. It may be expected, therefore, that Part VI. of the Bill, which deals with Customs and Excise other than liquor-licence duties, will be under consideration somewhere towards the end of the first week in September. In the meantime there are rumours in the Parliamentary lobbies that the Government will propose that instead of a duty based on annual value there shall be established a poundage rate on liquor-sales on all retail trade and on all wholesale sales direct to the consumer. This would, it is believed, be extended only to hotels, restaurants, and off-licence premises. In regard to medicinal wines there seems to be no likelihood of any further steps being taken to secure special treatment of retailers. Mr. T. H. W. Idris made an effort to bring the matter before the Chancellor of the Exchequer at the deputation of London Liberal members which waited upon him some time ago, and manufacturers have expressed strong doubts as to the possibility of obtaining a rebate on spirituous medicines, which include many tinctures and preparations from which the alcohol could be easily recoverable.

THE PETROL-TAX.

The attention of the Chancellor of the Exchequer was directed in the House of Commons on August 16, by Mr. J. E. Sears, to the case of motor-vehicle contractors who held unexpired contracts with private customers to supply motor-landaulettes, etc., and who, under those contracts, were unable to charge the amount of the petrol-tax to their customers. The Chancellor was asked whether, in the circumstances, he would make a special provision whereby the customer and the actual user of the petrol might be made to bear the tax, or otherwise give the benefit of the rebate in such cases as on commercial vehicles. Mr. Sears also called the attention of the Chancellor to the effect of the petrol-tax in the matter of Government Department contracts, and instanced the case of one firm which had held a mail-contract with the Post Office, which would be muled in regard to the petrol-tax to the extent of 580l. per annum, and asked the Chancellor whether he could see his way to make provision whereby a company or firm supplying motor-vehicles to a Government Department might charge the amount of the tax to the Department concerned.—The Chancellor of the Exchequer, in a written reply to the hon. member, said that these two questions raise practically the same point—namely, as to whether a person who has entered into a contract for the supply of goods before the passing of the Finance Act can increase the contract-price of the goods so as to enable him to recover from the person with whom he contracts any increase of price by reason of a duty being imposed upon the goods. This is a matter which is already provided for in a general enactment in Section 10 of the Finance Act, 1901, as amended by Section 7 of the Finance Act, 1902, and, upon the assumption that there is nothing exceptional in

the terms of the contracts to which his hon. friend refers, no special provision is required by the Finance Bill by reason of the imposition of the new duty on motor-spirit.

Mr. C. E. Hobhouse, Financial Secretary to the Treasury, received at the House of Commons on August 17, for the Chancellor of the Exchequer, a deputation of representatives of petroleum and other companies in regard to the motor-spirit duties. The bodies represented were the Asiatic Petroleum Co., the Bowring Petroleum Co., the British Petroleum Co., Messrs. Carless, Capel & Leonard, the Gas Lighting Improvement Co., Messrs. Pearson & Co., and the Petroles de Gresyne. It was pointed out that the tax, in its present form, was unworkable, that the increased charge should be placed on the motor-car owners, and that benzol and other motive spirits should be taxed as well as petrol.—Mr. Hobhouse promised to convey to the Chancellor of the Exchequer the views which had been laid before him.

DEADLY HAIR-WASH.

The Home Secretary has informed Sir William Collins that his attention has been called to the use of tetrachloride of carbon as a hair-wash, to the very great danger involved, and to the death referred to by his honourable friend. (*C. & D.*, August 14, p. 285). He is informed by the Privy Council that tetrachloride of carbon is not a poison within the meaning of the Pharmacy Acts, and there are, therefore, no restrictions as to its sale. As regards the steps to be taken in the matter, he can only say that the Director of Public Prosecutions has the question of a prosecution now under his consideration.

ISLE OF WIGHT ANALYST.

The President of the Local Government Board has informed Mr. Godfrey Baring that his Department has objected to the appointment of Mr. E. W. Pollard, of Ryde, as public analyst for the administrative county of the Isle of Wight—firstly, on the ground of his being engaged in a trade or business connected with the sale of drugs in the county; and, secondly, because the Department is not satisfied of his competent skill in and knowledge of analytical chemistry. A proposal has been made to meet the first objection, but this does not touch the second, and in the circumstances he does not feel able to approve of the appointment.

THE CINEMATOGRAPH BILL.

The Bill to make better provision for securing safety at cinematograph and other exhibitions, which was introduced by the Home Secretary as far back as the end of March, again made its appearance on the Order Paper of the House of Commons on Monday evening, but was not reached. The Bill provides that an exhibition of pictures or other optical effects by means of a cinematograph or other similar apparatus, for the purposes of which inflammable films are used, shall not be given save in licensed premises; licences to be issued by the County Councils, and to remain in force for not more than one year at a time.

WEED-DESTRUCTION.

Mr. G. L. Courthope asked the Vice-President of the Department of Agriculture in Ireland, in the House of Commons on August 17, whether on the second reading of the Weeds and Agricultural Seeds (Ireland) Bill he would accept an instruction to the Committee to extend the scope of the Bill to the United Kingdom.—Mr. T. W. Russell replied that the Bill had been drafted to meet the special conditions of agriculture in Ireland, and could not be extended to England and Wales without considerable modifications.

Business Changes.

Properly authenticated business notices (not being advertisements) are inserted in this section free of charge if promptly communicated to the Editor.

MR. JAMES MARSH, vanilla and drug merchant, has removed to 79 Fenchurch Street, London, E.C.

MESSRS. WILLIAM SUTTON & CO., 76 Chiswell Street, London, E.C., announce that after August 31 they are relinquishing the patent-medicine department of their business. The sundries and specialties departments will still be carried on.

"C. & D." Jubilee.

THE following are further references which have been made to the Jubilee Number of THE CHEMIST AND DRUGGIST by subscribers and in scientific and technical journals:

Your Jubilee number was extremely interesting, and we heartily congratulate you on its success.—*Howards & Sons*.

THE CHEMIST AND DRUGGIST's Jubilee Number was evidently a huge success. It was extremely well produced, and we congratulate our contemporary upon its continued prosperity.—*Photographic Dealer*.

In commemoration of the Jubilee of THE CHEMIST AND DRUGGIST the proprietors have issued a special number, containing a well-written historical account of the formation and development of the journal, in addition to its well-known features. . . . The number is excellently produced in a style to which we have grown accustomed regarding all issues of a special nature from the offices of THE CHEMIST AND DRUGGIST.—*Chemical Trade Journal*.

Half a century since, on September 15, occurred the birth of THE CHEMIST AND DRUGGIST. "What an immense time!" will be the exclamation of the rising generation, but to the matured chemist and druggist it does not seem so very long ago, for continuity has rendered the weekly issue essential to his constant requirements, and as in the past so also it is in the present day, and is likely to continue so long as the craft exists.—*Sirius* (131, 4).

The large and widely celebrated English technical paper THE CHEMIST AND DRUGGIST was able recently to celebrate its Jubilee on the occasion of fifty years of its existence. In honour of this occasion the number of July 31 appeared in a richly got-up volume of 212 pages. With the Jubilee Number is issued an exact reproduction of the first issue of the paper, which appeared on September 15, 1859. We wish, on our part, the best of prosperity to the paper for another fifty years.—*Zeitschrift des Allgym. österr. Apotheker Vereins*.

THE CHEMIST AND DRUGGIST has issued a Jubilee Number celebrating the fiftieth anniversary of the establishment of this important English journal of pharmacy and drugs. It contains a review of the progress made during the past fifty years in the sciences of chemistry and drugs. It also contains much practical information concerning pharmacy. The formulæ given by THE CHEMIST AND DRUGGIST are always appreciated, and have often contributed to make the fortune of those who have used them. The journal also reports the state of the world's market for drugs. It is a model paper.—*Le Medicin*.

FIFTY YEARS OF PHARMACY.—We have to congratulate our contemporary, THE CHEMIST AND DRUGGIST, on the production of its Jubilee and Summer Issue. The publication is a massive volume of text and advertisements, with which is presented as a supplement a facsimile of the first issue of THE CHEMIST AND DRUGGIST as a monthly trade circular in September 1859. The long and intimate connection of THE CHEMIST AND DRUGGIST with the drug-trade is suitably emphasised by a history of the journal and some very interesting biographical notes of persons in the trade. We felicitate our contemporary on finding itself in a state of such robust health after fifty years of strenuous life.—*British Journal of Photography*.

The issue of THE CHEMIST AND DRUGGIST for July 31 celebrates fittingly the attainment of our contemporary's Jubilee. The occasion of the annual Summer Issue of the magazine has been taken to publish a history of the growth of the periodical from its modest beginning in 1859 to the important technical journal it has since become. The contents of this Jubilee issue remind us that THE CHEMIST AND DRUGGIST has for many years given prominence to the scientific aspects of pharmacology, and has insisted consistently upon the value of a knowledge of pure science if scientific principles are to be followed successfully in technical processes. The present issue contains, in addition, an exhaustive account of the proceedings at the annual meeting of the British Pharmaceutical Conference, held at Newcastle-on-Tyne.—*Nature*.

THE CHEMIST AND DRUGGIST looks back on fifty years of existence, and on this occasion has issued a Jubilee Number richly got up and provided with an extremely extensive advertisement section, which mirrors faithfully the character of the paper as a trade paper, which is what it calls itself. . . . THE CHEMIST AND DRUGGIST has induced all branches of the drug-trade to advertise in the Jubilee Number, which it very well understands how to do, and it offers in this number, with its 212 advertisement-pages, an interesting review of the entire industry connected with the English pharmacist, which extends to articles such as bathing-gloves, artificial limbs, eyeglasses, remedies for the hair, combs and sponges, soaps, perfumery, and toilet-articles. We wish the paper, existing on the basis of a wholesome realism, in the golden freedom and independency of England, and happily flourishing, further prosperity.—*Pharmaceutische Zeitung*.

Scientific Progress.

Temperatures under this heading are on the Centigrade scale.

Reducing-power of Electrolytic Hydrogen.—William Thompson ("Chem. News," April 2, p. 157) has compared the reducing-action of electrolytic hydrogen on arsenious and arsenic acids when liberated from the surface of different elements. Thirteen elements were tested—viz., lead, zinc, cadmium, tin, silver, graphite, iron, platinum, aluminium, gold, cobalt, nickel, and palladium—and the order above is that in which they are capable of removing arsenium as arseniuretted hydrogen from a solution containing arsenious acid. With arsenic-acid solution, however, this order does not hold good. Thus with the *ous* solution the first six elements reduce the whole of the arsenic in solution with a current of three ampères over twenty-five minutes, but the amounts dissipated as gas with cobalt, nickel, and palladium were 43.5, 42.5, and 38 per cent. respectively; under the same conditions, with the *ir* solution, lead (98.5), zinc (41), iron (40.5), cadmium (27), tin (18.5), aluminium (9), graphite and gold (4), and the others (0) is the order, the figures in parentheses being percentages of arsenic acid removed. The current-density produces but little effect on the result.

Estimation of Ammonia in Urine.—In reviewing the requirements and methods for the estimation of ammonia in urine, Mr. G. C. Mathison states ("B. M. J.", 1909, I, p. 715) that particularly accurate results are not necessary. Normally about 3 per cent. of nitrogen is excreted in the urine in the form of ammonia, but in disease it may attain even 50 per cent. Malfatti's method, using the formation of hexamethylene-tetramine from formaldehyde and ammonium salts, is favoured by the author as being sufficiently accurate. The procedure is as follows:

Urine (25 c.c.) is diluted with water (50 c.c.) in a 250-c.c. conical flask, and alcoholic phenolphthalein solution (4 drops) added. Decinormal sodium hydrate solution is added until neutralisation is effected, which also gives the amount of acidity. 5 c.c. of commercial formaldehyde solution, neutral to phenolphthalein, is added and the titration continued until the pink colour reappears. From the number of c.c. used in the second titration the amount of nitrogen present as ammonia in the twenty hours' urine can be readily calculated.

The author states that better colour-changes are obtained if 15 grams of potassium oxalate is added to the urine two minutes before titrating. The results obtained by this method are usually about 15 per cent. higher than the Folin method, possibly due to the presence of amino-acids.

Determination of Gingerol in Ginger.—H. Garnett and J. Grier forwarded a note on this subject to the British Pharmaceutical Conference which arrived too late to be placed before the meeting. Their later experiments have been conducted without the use of alkaline substances (sodium carbonate, ammonia, lime, and magnesia), since no advantage resulted. Caustic alkali destroys the gingerol, and there is appreciable loss through resinification with magnesia. Ten grams of the finely powdered drug, after being dried for fifteen minutes in a water-bath, was extracted with the following insolvents:

Light Petroleum (B.P. 70°-90° C.).—The ginger was extracted with the hot solvent for two hours in a Soxhlet apparatus (cold petroleum dissolves gingerol but sparingly). The marc was then still distinctly pungent.

Ether (free alcohol and water).—Completely extracted the gingerol, which, however, contained more inert fatty and resinous constituents.

Aleohol.—Absolute alcohol gives an extractive similar to ether. Percolation in the cold with 50 and 60 per cent. alcohol yielded the gingerol freely, but accompanied by much inert extractive of a gummy or saccharine nature.

Acetone.—Yielded the gingerol rapidly, at first, by cold percolation, but, as with petroleum, not completely extracted.

For purification of the petroleum extractive the percolate was shaken out with three successive quantities of 60-per-cent. alcohol to remove the gingerol (oils and much colouring-matter remaining in the petroleum). After washing the alcoholic solution with a little petroleum, the alcohol was removed by evaporation and the residual liquid shaken out with three successive portions of ether. The bulked etherical solutions were then evaporated down, and the gingerol weighed after drying on a water-bath until of constant weight. The purity of the gingerol is checked by noting its solubility in 1-per-cent. aqueous solution of potassium hydrate. If ether or acetone was used for extraction, the solvent was recovered, and the residue boiled out with successive quantities of petroleum ether and then treated as above. Carbon bisulphide or chloroform may replace ether in the final stages, in which a drop of dilute hydrochloric acid facilitates the separation. Ether is apparently the better solvent for extraction.

Observations and Reflections.

By "Xrayser."

Business Knowledge

was the title of an article which appropriately introduced the varied mass of business material comprised in the recent Jubilee Number. The writer of the communication represents a firm who have shown in a substantial manner their belief in the importance of this study as an integral part of the education of the pharmacist. Whether young chemists are above or below the line of average efficiency in this kind of knowledge can only be a matter of opinion based on more or less imperfect information. My own impression is that modern pharmacists are particularly well grounded in matters in which arithmetic plays a part. The Minor examination, the chemistry section especially, ought to ensure this. Mr. Holden does not express an opinion. If his experience suggests a different conclusion, that is more likely to be correct. But it is possible that we are not quite so sound on legal matters affecting daily shop-life as we should be. It would be interesting to know, for example, what proportion of the candidates at the recent Fairchild examination appreciated the exact importance of the words "carriage forward" in Question 4. Another illustration of the difficulty of implanting an elementary knowledge of legal procedure may be found in the frequent recurrence of questions to the Editor concerning the length of notice to which an assistant who is paid weekly is entitled. Mr. Holden remarked that the answers to several of the reprinted questions could not be learned from books. There can be very little in this branch which has not appeared in the *C. & D.* or the *Diary*, but, in any case, there is probably an opening for a sixpenny book on general law as it may affect chemists from one of our now numerous learned friends at the Bar. But, after all,

Business Tact

is of greater value than mere business knowledge, and this, it is a fact, cannot be learned. It is probably conspicuously absent in the man who particularly prides himself on its possession. To induce a customer to buy something different from the thing asked for may or may not be tactful; if the seller got a penny extra profit by his smartness the odds are against tact having been exercised in that instance. What St. Paul said of charity is largely applicable to tact, only that in the latter case the virtue may be only superficial. It is tactless, for instance, to let the world perceive that you are puffed up, however convinced you may be of your superiority. In other words, tact is not necessarily honesty, though it is bound to assume that quality; and when the wicked flourish they are generally gifted with a considerable supply of tact. Mr. D. S. Windle displayed marvellous tact in his short campaign against the South-Western Bank, but he would have been better off if he had not possessed so much of that accomplishment. It is, of course, a platitude to declare that nothing establishes a business—at any rate, a pharmaceutical one—so securely as trustworthiness; but the platitude may be sharpened and supplemented by the observation that even the absolutely honest pharmacist will get on a little faster with tact than without it.

The Drug-habit

may soon become, possibly is already, a subject of immense national importance. There is some reason to believe that it is developing rather rapidly among us; if more rapidly with us than among other nations our position in the world is doomed. Neither wealth, nor Dreadnoughts,

nor athletics will save us. If half that is said of heredity be true, if neurasthenia and allied complaints are indeed favourite fashionable diseases in Society, if we are more susceptible to pain and more eager to escape it by the employment of nerve-wrecking remedies than even our immediate ancestors were, the tendency towards decadence is appreciable, and it is time that these signals were observed with more attention than they have yet commanded. Prominent among the triumphs of scientific medication during the last generation has been the synthetic production of a large number of hypnotic and sedative remedies, and it cannot be ignored that the names of many of these drugs have quickly attained the position of household words in our language. Remarkable as laboratory achievements, it is still an open question whether mankind has benefited physiologically by the introduction of these chemicals. To say the least, they have offered opportunities for the cultivation of drug-habits, and there are many people to whom opportunities of this kind are inevitably fatal. A clever and interesting book on

"Drugs and the Drug-habit,"

by Dr. Harrington Sainsbury, was published a few months since by Messrs. Methuen, and reading it has suggested the preceding paragraph. But it has to be said that, from a corrective, not to say an alarmist, point of view, Dr. Sainsbury's work is disappointing. Assuredly he is conscious of the dangers of the drug-habit. He aptly applies to it a comment by De Musset on Louis XV.'s refusal to listen to a recommendation of a candidate for royal favour, that it was "if not a death sentence, at least a veto on life." But he has nothing to say as to its prevalence, and very little of its practical hopelessness. He writes pleasantly of Drugs, of Pain, of Habit, of Control, and of Cure, interspersing quotations from numerous languages into a fabric composed of a good deal of medical learning. Occasionally mathematical formulae are introduced, and from these the casual reader may perhaps acquire the impression that modern medicine is almost an exact science. For example (p. 191), health is said to be made up of many factors. Call these *a*, *b*, *c*, *d*, etc. A disturbance which we call disease comes along. Let that figure be represented as *x*. Now call the drug which is administered to drive out the disease *y*, and if *y* be the complete negation of *x*—equal, in fact to $-x$ —the treatment is perfect. This work is one of a series which we are told is addressed to the intelligent layman, the statesman, and the scientist, as well as to the medical man, on "matters of the very gravest importance." The possibility of the ruin of the race is a matter of the gravest importance; but frivolities of the character just indicated are not calculated to convince the intelligent layman that the danger is imminent. The strengthening of

The Poisons Schedule

is the one definite suggestion Dr. Sainsbury puts forward as a possible means of guarding the public "against those more insidious approaches of habit which the present Act scarcely contemplates." On this point the author is not disposed to dogmatise; he is not sure "where wisdom would lead." But some day, when the question of restricting the facilities for obtaining dangerous drugs is perceived to be a prime necessity from a national point of view, the Schedule will be seriously contemplated as the simplest available machinery. It will then be seen that there is no particular kind of sense in chaining sulphonal, and leaving uncontrolled a dozen other substances quite as likely to lead to drug-habits. It is of no use to ignore the fact, however, that chemists have made the extension of the Schedule difficult by their almost passionate defence of its integrity as a monopoly to which they have a vested right. Their best policy would have been from the beginning to interpret it as it was intended—as a trust committed to them by the Legislature.

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Editorial Comments.

The Advance in Rubber.

IN view of the remarkable advance in the price of raw rubber, we have made inquiries as to what effect this is having upon the prices of the finished products handled by chemists and druggists. The extracts from manufacturers' and dealers' letters, which we print on another page, show how the matter stands. It will be seen that the advance in most instances varies from 5 per cent. to 15 per cent., according to the class of goods, and if the market for rubber should further advance, it is quite likely that prices will have to be again adjusted. Up to the present buyers are still at an advantage, as the advance in raw rubber is not yet fully reflected in the finished article; but when makers' stocks on hand have been worked off, and if the advance in raw rubber is maintained, further increases may be looked for. Judging from the tenor of the letters we have received, it would appear that there is an unsettled time ahead for the makers of rubber goods, who are compelled to face an enormous advance in raw rubber without a compensating advance on finished products. In 1903 and 1904 there were three advances each of 10 per cent. on the part of manufacturers, but on the present occasion the advance is phenomenal and more pronounced. This may be judged from the fact that in February 1908 fine hard Pará rubber was selling at 2s. 9d. per lb. on the spot, whereas to-day it is worth 8s. 3d. July was an exciting month, prices commencing at 6s. 6d. and closing at 8s. 4d. They dropped to 8s. early this month, but this was merely temporary, and the market has again advanced to the 8s. 3d. rate. How long these high prices are expected to rule it is impossible to state. In certain quarters the opinion is held that they must rule for many months to come, some brokers believing that 10s. will be reached. As it is, forward business for 1910 is being done at about 1s. per lb. below current rates; on the other hand, the opinion is expressed that a decline of 2s. to 3s. per lb. may take place shortly, but even well-informed brokers are not in a position to judge. Meanwhile there has been a remarkable boom in the flotation of new rubber companies, July alone establishing a record with twenty-three companies, involving capital of over 1,860,000. These concerns are getting to work as quickly as possible, and future supplies, say, within the next four or five years, are bound to be materially increased, judging by the acreage devoted to rubber in the East, where it is estimated there are 600,000 acres now under cultivation.

Such a high figure as at present prevails for rubber is undoubtedly detrimental to the best interests of makers, whose trade in the present famine tends to disorganisation, as naturally retailers do not care to stock high-priced goods which are liable to violent fluctuations. The public also object to pay the higher prices; but it should be explained to them that the present rise is unprecedented, and that when reduced prices again prevail for rubber, they will have the benefit. In the present market conditions chemists would be well advised to cover their winter

requirements early. It need hardly be said that the development in the motoring and cycling industries is responsible for the greatly increased demand for rubber, and these large users are the first to feel the pinch. Some of them maintain that the abnormal advance is not due to natural fluctuations of supply and demand, but to internal and artificial manipulation of the market. Consequently they deprecate this interference with the flow of raw materials, resulting in loss and inconvenience to themselves and customers. The same remarks apply also to rubber druggists' sundries makers, who no doubt would like to see prices at round about 4s. per lb. We understand that German rubber manufacturers have raised their prices from 10 per cent. to 15 per cent. on surgical articles of soft rubber in order to avoid making any alteration in quality.

The Use of Formaldehyde.

THE Local Government Board has just issued a report by Dr. G. S. Buchanan and Dr. S. B. Schryver on the use of formaldehyde as a preservative of meat. The forms in which formaldehyde is employed in the meat-industry are (1) as proprietary preparations which depend on the formaldehyde they contain, (2) in meat safes with a special arrangement for fumigating the contents, and (3) in the holds of vessels which convey chilled meat to this country from South America and elsewhere. One of the proprietary preservatives was found to be a mixture of glycerin, salt, and formaldehyde. For meat-safes polymerised formaldehyde is employed, such as paraformaldehyde or trioxymethylene. These substances are depolymerised by heat; the meat is left in contact with the evolved formaldehyde for about twenty minutes, when excess is removed by passing a current of air through the safe. This method is also used for milk, which is passed through a sieve, and in a finely divided state comes into contact with the vapour. The process of volatilising formaldehyde in the holds of ships carrying chilled meat is stated to be employed to prevent the formation of certain moulds not inhibited by cold, and on sanitary grounds there can be no objection raised, but the presence of formaldehyde in food is undesirable. The absolute prohibition of formaldehyde for preserving food was recommended by the Departmental Committee on Preservatives and Colouring-matters in Food. Dr. Schryver conducted a series of experiments to find out whether meat conveyed in chilled and sterilised holds retains a proportion of the formaldehyde. He was able to recover formaldehyde from not only the surface of the beef but from parts below the surface. Boiling and roasting reduced or even removed the formaldehyde, but grilling only made the formaldehyde penetrate more deeply into the substance of the meat. Dr. Buchanan suggests that meat-importers should review their methods of employing formalin, limiting its use to the adequate disinfection of the holds before the meat is introduced. The results of the researches have special significance as regards minced meat or other food with a relatively large surface in proportion to weight which is exposed to the action of formaldehyde in safes. The reaction which Dr. Schryver worked out for detecting and colorimetrically estimating small quantities of formaldehyde in meat is as follows :

To 10 c.c. of solution containing the aldehyde is added 2 c.c. of a freshly made and filtered 1-per-cent. solution of phenylhydrazine hydrochloride. To this is added 1 c.c. of a 5-per-cent. fresh potassium-ferricyanide solution. To the mixture, 4 c.c. of concentrated hydrochloric acid is then added. In the presence of formaldehyde, a brilliant fuchsin-like colour is developed, which reaches its full intensity after a few minutes' standing and keeps without marked deterioration for several hours.

Applied to the detection of formalin in meat the method was worked as follows :

Meat is heated for five minutes in a boiling-water bath with water to every 10 c.c. of which has been added 2 c.c. of a 1-per-cent. phenylhydrazine-hydrochloride solution. Ten grams of meat, previously minced, is generally employed for each experiment, but the quantity of liquid is varied according to the amount of formaldehyde present. In most cases where the amount of formaldehyde is 1 part in 50,000 or less, 10 c.c. of water and 2 c.c. of phenylhydrazine solution are employed. Where the concentrations are higher, larger quantities of liquid must be used. Thus, where the concentration of the aldehyde reaches in the meat 1 part in 5,000, 10 grams of meat is heated with 100 c.c. of water and 20 c.c. of 1-per-cent. phenylhydrazine-hydrochloride solution. After heating, the liquid is cooled and filtered from the coagulum through a loose plug of cotton-wool. To 12 c.c. of the filtrate are added 1 c.c. of 5-per-cent. potassium-ferricyanide solution and 4 c.c. of concentrated hydrochloric acid for each 12 c.c. of water and phenylhydrazine reagent employed in the test. By comparison of the colour with standards made from the standard formaldehyde solutions, the amount of formaldehyde in any given meat sample can be ascertained.

Indian Indigenous Drugs.

THE Indigenous Drugs Committee of India have issued their second report, which deals with twelve drugs. The first report was published in 1901, and was concerned chiefly with the proceedings of the Central Committee. It may be recalled that the Government of India in 1894 directed attention to the practicability, as well as the utility, of (a) encouraging the systematic cultivation of medicinal plants indigenous to India; (b) encouraging the increased use in medical dépôts of drugs of known therapeutic value; and (c) sanctioning the manufacture of stable preparations of certain drugs at the dépôts. The Committee were further asked to consider the question of conducting experiments to test the therapeutic value of indigenous drugs. The proceedings of the Committee were occupied mainly with the collection and collation of evidence as to the nature of Indian drugs, including native remedies—their origin, preparation, purity, and medicinal value (real or reputed)—also in what form or galenical preparation the therapeutic properties of the drug would be best represented. Provincial committees were formed to carry out local investigations in the Central Provinces, the North-West Provinces and Oudh, Bengal, Punjab, Burmah, and Assam, and also at Bombay and Madras. Provisional lists of drugs suitable for investigation were published, and five drugs issued for testing, forms for the clinical reports being also supplied. The preparations originally issued were tinctures (1-in-8) of *Adhatoda vesica* (leaves and root), *Alstonia scholaris* (bark), *Calotropis procera* (root-bark), *Picrorhiza Kurroa* (rhizome), and the resin from the root of *Podophyllum Emodi*. The maximum dose advised for the tinctures was one dram, and for the resin one grain. *Calotropis* was also supplied in powder form to be administered in doses up to ten grains as an alterative and sixty grains as an emetic. The clinical returns sent in did not allow of definite conclusions being arrived at. The system of Provincial Committees proved a failure owing to the very imperfect or absence of any serious response, and the system was abolished in 1900. The central body was then authorised to carry on the work as the Indigenous Drugs Committee, utilising the services of officers in charge of local hospitals and suitable voluntary investigators. The report just issued gives the results of this work. The first inquiry respecting Indian podophyllum is undoubtedly the most promising as regards immediate results. Mr. J. C. Umney (*C. & D.*, 1892, II., p. 317) considered it undesirable that the resin from the Indian root should replace that from the American root, as the larger quantity of resin yielded by the former is counterbalanced by the smaller proportion of

active ingredient present. Dunstan and Henry (*C. & D.*, 1898, I., p. 337) stated that the Indian resin is quite as powerful in action as the American product, while Drs. Mackenzie and Dixon ("Edinburgh Medical Journal," November 1898) describe the Indian resin as twice as active physiologically as the American variety. Dr. T. A. Henry, writing to THE CHEMIST AND DRUGGIST of April 18, 1903, mentions that the difference in behaviour of the Indian resin to ammonia solution is due to the fact that it contains one and a half to three times as much podophyllotoxin (the chief constituent) as the American resin, and states that Dott's paper (*C. & D.*, 1903, April 18, p. 506) on the "Resin of *Podophyllum Rhizome*" is likely to give an erroneous impression of the therapeutic value of Indian podophyllin. Mr. D. B. Dott (*C. & D.*, 1904, I., p. 116) replied that the bulk of evidence was against Indian podophyllin having the stronger purgative action. In the Committee's first report good results were stated to have been obtained, without griping effects, in doses of half to one and a half grain. It is interesting to note that the clinical reports of six investigators in Indian hospitals agree that the resin from *Podophyllum Emodi* is a very useful cholagogue purgative, and equal to the resin from *Podophyllum peltatum*. In the following notes we summarise the reports on the twelve products dealt with :

Podophyllum Emodi (resin).—Hospital Assistant Gunabhiram Das, Military Police Hospital, Ajial, who furnished the fullest reports, finds "its purgative action is better than podophylli resina, as the drug does not produce griping." Captain William Anderson, Parachinar Civil Hospital, Kurram, finds the resin requires to be given in doses of $\frac{1}{2}$ to 2 grains, and that it is liable at times to gripe, and even to cause vomiting. The resin is stated to be quite as valuable as that obtained from *Podophyllum peltatum*. Lieut. Hyde Hills and Lieut. Brooke Churchill, Cawnpore Station Hospital, consider Indian podophyllin "rather a drastic purge" in doses of 1 to $\frac{1}{2}$ grain. Major D. W. Sutherland, Mayo Hospital, Lahore, finds it about equal in value to the pharmacopeial resin.

Alstonia scholaris (tincture of bark).—The reports do not encourage the hope that this drug will become a "reliable makeshift" for quinine. It may be useful in mild cases of ague, but in severe cases no effect was produced, while quinine afterwards subdued the fever in forty-eight hours.

Pierorhiza Kurroa (tincture of rhizome).—The drug was reported to be of little use as an antiperiodic, and very inferior to quinine.

Adhatoda vesica (tincture of leaves).—The opinion is confirmed that adhatoda in suitable cases of asthma and bronchitis is a useful addition to the list of expectorant drugs. *Calotropis procera* and *Calotropis gigantea* (tincture of root bark).—Conflicting reports were received. Calotropis appears to be useful in mild subacute cases of dysentery, but recovery is slow.

Cutch from *Acacia Catechu*.—The standards of Mr. David Hooper (yield to 10-per-cent. alcohol between 60 and 70 per cent., and ash not more than 5 per cent.) have been adopted. Mr. Hooper's analyses show that 25 per cent. of Indian cutches fall below this standard by reason of adulteration.

Cesalpina Bonducilla (seed in powder).—No reports received regarding its tonic and febrifugo properties.

Ipomoea hederacea (seeds in powder, prepared as pulv. jalape co.).—Captain Anderson reports that "it is a useful purgative," and acts as a hydragogue cathartic.

Andrographis paniculata (liquid alcoholic extract).—Captain Anderson finds it of use in mild cases of malarial fever, but useless in severe cases, and not to be compared with quinine. Dr. F. X. de Attaises says it is a good tonic when used in place of chireeta.

Embelia ribes (powder).—Failure to act as a vermicide was reported in the only case in which it was tried as a substitute for malefern.

Rheum Emodi (powder).—In 5 to 10-grain doses its purgative action was not satisfactory, since it is liable to gripe and is irregular in action.

Senna leaves from *Cassia montana* (syrup).—Quite unsatisfactory.

The tests of the therapeutic properties of the drugs are thus not very striking. Indian jalap and adhatoda give indications of therapeutic value, but further inquiry is needed. The reports confirm the view that Indian podo-

phyllin is equal or more active than the American resin. *Podophyllum Emodi* is abundant in the Himalayan forests from Chitral to Sikkim, growing at an altitude of 7,000 to 14,000 ft. It could be obtained in abundance, but none of the Indian root has yet appeared on English markets in commercial quantities.

Carbon Tetrachloride as a Dry Shampoo.

Dr. A. D. Walker, Director of the Physiological Laboratory of the University of London, has contributed to "The Lancet" the results of the experiments regarding the relative toxicity of chloroform and carbon tetrachloride which have extended over some years. He judges that carbon tetrachloride has a toxicity about double that of chloroform, and adds that hair-wash of which the principal ingredient is carbon tetrachloride has a still greater toxicity possibly due to the presence of other ingredients. Dr. Veley examined the hair-wash to which Dr. Walker refers, and found it to consist of carbon tetrachloride 94 per cent., water with perfume 4.5 per cent., and carbon disulphide 1.5 per cent., derived from the process of manufacture. Carbon disulphide is itself intensely poisonous and quite sufficient, Dr. Veley thinks, to account for the increase of toxicity over carbon tetrachloride to which Dr. Walker refers. The liquid has been used in place of benzine as a dry shampoo because of its non-inflammability—fatal accidents having occurred in using benzine on the hair. Now carbon tetrachloride, with a vapour 5.3 times heavier than air, has been found to be dangerous, there will probably be a return to the older alcoholic dry shampoo which was replaced by benzine and carbon tetrachloride on the score of expense.

Opium in China.

A lengthy report on the opium question in China, drawn up by Sir Alexander Hosie, Acting Commercial Attaché to the British Legation at Peking, has been issued as a Parliamentary paper. Two years have elapsed, he says, since the issue of the anti-opium decree, and there can be no doubt that, in spite of the absence of any well-organised uniform scheme, much is being done—in fact, "perhaps too much is being attempted in too short a time with the machinery available for the purpose." As regards anti-opium medicines, their number is legion, and many of them contain opium or morphine in varying quantities. The husk of the foreign opium ball, the report states, made up into pills, is also sold as a cure, and most of the reports from the provinces draw attention to the serious evil which these so-called remedies are creating. An English missionary in the Province of Szechuan imported from Singapore thirty sacks of the Malay anti-opium plant (*Combretum sundaicum*), and he reports that he had at the date of writing tried it on about fifty persons, and that in every case the medicine had effected a cure. As to the future, the memorial presented to the Throne by the Board of Finance, which received Imperial approval, expresses the opinion that poppy-cultivation and opium-smoking will be abolished well within the period of ten years originally fixed, and that, in the absence of demand, foreign importation will cease. "These," adds the report, "are sanguine views, and it is hoped they will be realised." Sir A. Hosie gives detailed reports from the various provinces, most of which are of a conflicting nature, and the statements based on the oral testimony of travellers and missionaries differ so widely as to make him diffident of expressing any decided opinion. Two questions, claiming further attention in connection with the suppression of opium are as to what can be grown in place of the poppy, and how can the revenue hitherto derived from opium be made good? In regard to the first point, the report holds that it is to the development of railways the Chinese cultivator must look to enable him to grow and dispose of the crops best suited to climate and soil; while as to the latter, a beginning has been made in Szechuan by the imposition of salt-taxes.

The Advance in Rubber Goods.

WE give below extracts from letters received from manufacturers of rubber goods in reply to our inquiries as to what effect the unprecedented rise in rubber has had upon articles such as air-cushions, hot-water beds and bottles, syringes, sponges, teats, tubing, cut-sheet goods, etc. Supplementing these letters, we comment on the general situation on p. 342.

Messrs. S. Maw, Son & Sons, in an interview, inform us that they have been obliged to make an advance in rubber goods of 10 to 15 per cent., according to the class of goods.

Messrs. James L. Hatrick & Co., Ltd., state: "We have covered ourselves for some time to come, and we are only charging 10 per cent. additional, which advance, so far as we are concerned, has been in vogue for the last nine months. There is no advance on vulcanite goods."

Mr. R. J. Reuter states: "We have to be led entirely by the increase that the manufacturers put on the various lines. In the majority of cases all pure rubber goods, such as teats, tubing, and enemas, have been advanced 10 per cent. by all the manufacturers, and in the case of one manufacturer 20 per cent. Sponge-bags, air-cushions, and vulcanite goods have not been materially affected, and up to the moment we have had no advice of advances on such goods."

Messrs. F. Schutze & Co. inform us that "the continuous advances in rubber have caused them to reluctantly put up the price of proofed goods 10 per cent., such lines as water-beds, syringes, air-cushions, sponge-bags, sponge-wraps, pouches, etc., coming under this heading. Teats and tubing have also advanced 10 per cent., but up to the present they have not made any change in the price of vulcanite goods, although from market indications they are afraid they will soon have to."

Messrs. Burge, Warren & Ridgley, Ltd., write: "Those goods which contain the largest proportion of pure rubber, such as sponges, teats, tubing, syringes, etc., have been subjected in most cases to two successive advances of 10 per cent., while other goods in which rubber plays a lesser part have been advanced 10 per cent. and 5 per cent., or in some cases 10 per cent. only. Even vulcanite goods, in which the proportion of rubber is still less, have in many cases been subjected to 5-per-cent. advance."

Messrs. J. H. Haywood, Ltd., send us copy of a circular issued in July giving notice of the following advances: Air beds and cushions, hot-water bottles, water beds and cushions, 5 per cent.; cut-sheet goods (including ice-bags, pessaries, indiarubber trusses, urinals, Pará rubber bandages, and gas-bags), 15 per cent.; enemas, injection-bottles, sootherns, teats, and all other rubber goods, elastic stockings, etc., all-elastic belts, and elastic bandages, 10 per cent.; appliances partly elastic, 5 per cent.

Mr. Arthur Berliner writes that "the phenomenal advance of 300 per cent. on raw rubber must necessarily cause the prices of all surgical rubber goods to be raised considerably. At the present time the majority of the firms have only added 10 per cent. to their last year's prices, averaging their stock with the cost of the first advance; thus at 10 per cent. on prices the customers still have a great advantage, but when the existing stocks are exhausted and the advance on the raw materials is maintained, the present prices may be doubled. At any rate, chemists will be on the safe side in placing their orders early for their winter requirements."

Messrs. J. G. Ingram & Son point out "that the effect of the advance on each article varies according to the quality of rubber used with same. On such articles as sheetings, hot-water bottles and beds the effect would not be so serious, inasmuch as a good medium rubber may be used for these goods, and also a large proportion of the mixing is composed of fabric; further medium grades of rubber have not advanced in like proportion to best Pará rubber. Therefore such goods as best-quality teats, tubing, syringes, etc., would be very seriously affected, as they contain, if not all, a portion of Pará rubber, which has advanced so materially in price."

The North British Rubber Co., Ltd., write that "the present abnormal price of crude rubber has of course greatly affected the cost of manufacture of all rubber goods, especially of those of higher quality. At the present time our advance upon these only equals 10 per cent. on our ordinary listed prices. But this does not anything like cover the extra cost, and unless there is a very speedy drop in the market price—which does not seem to be likely—there will have to be a very considerable further advance. The present market price of Pará rubber is 8s. 4d. per lb., against what might be taken as a fair average of 4s. per lb. If no fall in the price of rubber takes place buyers will have to accustom themselves to a very much higher basis of values than at present, and we think they will be well advised to cover their requirements now before a further considerable advance takes place."

A Pharmacist in Camp.

HAVING just returned from a week's camping with the Territorials, it occurs to me that some of the readers of THE CHEMIST AND DRUGGIST may be interested in knowing what the duties of a compounder are and how the time is spent in camp. I am connected with the R.A.M.C., and am one of the pharmacists in the 3rd City of London Field Ambulance. Not having been elevated to the honorary lieutenancy that so many young pharmacists have been waiting for, and not yet being entitled to sit for the sergeant's examination, I am but a common or garden private, and, apart from the special duties that naturally fall to the dispenser when he is required to dispense, I had simply to do a private's work. My object is to tell just what that work is in the R.A.M.C. All the officers of the corps are West-end medical men. Though some of them are at the top of the tree in their profession, they put on no "side," and associate freely with the N.C.O.s and men in their sports and games. They are Territorials for the love of the work. Our Major is not only a "Terrier," but a terror at drill, and he insists on the utmost care being taken by every man not only in his drill, but in his personal appearance. Every man must shave daily, otherwise he hears about it, as some men did.

We left Waterloo Station on Sunday, August 8, at 11 A.M., and after a nice run to Amesbury and a six-mile walk to Fargo, we reached our camp about four, quite ready for a rest and a square meal. One of the first duties was to make up a bed, by stuffing a mattress and a pillow-slip with straw. On the whole the result was a very comfortable bed, and after a day in the broiling sun one is only too glad to get off to sleep. At five o'clock every morning the *reveillé* is sounded; five minutes later everyone is busy turning the beds out and placing them in front of the tents. Between five and six we have finished washing and everything is cleaned up, and at six o'clock the bugle is sounded for parade and roll-call. Breakfast is usually taken at seven o'clock, parade again at 7.45, and then off for a field-day. During the field-days, operating and hospital tents are pitched and the stretcher-bearers go in search of the wounded. During the week there were several sham fights, and we were busy collecting those who had collapsed from the heat. There was quite a number of these, but no serious cases, and my medicine-case was not once required for the whole week—cold water being found to be the best restorative. After the field operations we generally got back to camp about two or three o'clock, and then dinner is served. Then we sleep, read, or write till tea. Thereafter games are played—cricket, football, and sports between the different units of the R.A.M.C. In the evening concerts are held, and we have a high old time till the bugle sounds "lights out" at 10.15 P.M.

The general duties of a private in the R.A.M.C. are slight. Every private must take his turn as fireman, picket, police, or sentry, and on hospital-duty. The last-named is of course the most interesting. Whenever a case is brought in the medical officer in charge gives the hospital orderly full instructions as to the nature of the patient's illness and the best way to treat him and nurse him, so that every private soon gets to know what to do in similar circumstances. I happened to be on hospital-duty one night, and a message came to remove a patient to hospital. Getting the ambulance and transport ready, I set off for a three-mile drive in the dead of night. Fortunately the case was not very serious, but it was judged safer to remove the patient to the permanent military hospital at Bulford. There was great excitement in camp when we heard of the motor smash. It was stated in one paper that the ambulance was sent from Fargo, but this was not the case. We were three miles away, and none of our units had anything to do with treating the wounded. With exceptions the food was all right, and the week was a thoroughly enjoyable one. It only remains to add that the 3rd Field Ambulance was highly commended for the manner in which it carried through the work during the fortnight in camp. I heartily recommend assistant pharmacists to join the Territorials, especially the R.A.M.C., where their ability is recognised, and where they are taught a great amount of useful first-aid knowledge.

Dosage Difficulties.

By G. P. Forrester.

THE dispenser's attitude towards prescriptions calling for abnormal doses of potent drugs has recently been discussed in Great Britain (see Mr. Donald McEwan's paper, *C. & D.*, 1909, I., p. 124), but none of those who have taken part in the consideration sufficiently noted the fact that other countries have foreseen the possibility of such occurrences and have established various regulations, usually embodied in the Pharmacopeia of the country, which place the pharmacist in a position to deal on a legal basis with such cases. Reference to the regulations of this kind in various countries shows how this dilemma is obviated, and I append an abstract of these :

Belgium.—In the Pharmacopeia a list of maximum doses, both for single doses and total amount administered within twenty-four hours, is appended, referring to administration by mouth or per rectum. If the prescriber wishes to overstep the amount given in this table, he must denote his intention either by underlining the dose or placing ! (point of exclamation) after it. If either should be omitted, the dispenser must apply to the physician for its indication, and should he be unable to communicate with the prescriber, he is to reduce the dose to the amount given in the table, informing the doctor of the change made. The amounts refer to doses for adults, and must be correspondingly decreased for

unless the directions for use clearly indicate whether it is for internal or external use.

Italy.—A table of maximum doses is also existent, and the law states that when a medical man prescribes poisons in dangerous or non-medicinal doses, the pharmacist shall demand that he denote on the prescription itself that he (the doctor) assumes himself the responsibility, and must also indicate the use to which it is intended.

Japan.—Doctors who wish to overstep the doses given in the table "must place an exclamation mark (!) under the name of a medicine in the prescription." (In the former edition of the Pharmacopeia Japonica √ was the sign required in such cases.)

Switzerland.—The doses given in a Pharmacopeia table apply to the administration of the preparations either internally, by hypodermic or intravenous injection, as a clyster or suppository, and higher doses must be followed by ! (point of exclamation). In the case of guaiacol, guaiacol carbonate, creosote, and creosote carbonate, as well as methyl salicylate, maximum doses for the percutaneous application of the above are also given. It is interesting to note that the requirement of the previous Pharmacopeia—namely, that higher doses should be written in words and underlined—has been abandoned in favour of the simpler !.

Appended are a few of the maximum doses taken from the various Pharmacopœias ; the first amount in each column is the maximum single dose, the second applies to the total amount permissible within twenty-four hours. All weights in grams :

| | Belgium | France | Germany | Italy | Japan | Switzerland | B.P. Maximum Single Doses |
|---------------------------|---------|--------|---------|-------|-------|-------------|---------------------------|
| Acid. hydrocyan. dil. . . | 0.1 | 0.5 | 0.1 | 0.5 | | | 0.35 |
| Acid. arseniosum . . . | 0.005 | 0.015 | 0.005 | 0.015 | 0.005 | 0.005 | 0.0043 |
| Aq. laurocerasi . . . | 2.0 | 10.0 | 2.0 | 10.0 | | | 7.1 |
| or Aq. amygl. amar. . . | | | | | 2.0 | 6.0 | |
| Caffeine . . . | 0.5 | 1.5 | 0.5 | 2.0 | 0.5 | 1.5 | 0.32 |
| Cocain. hydrochl. . . | 0.05 | 0.15 | 0.05 | 0.15 | 0.05 | 0.15 | 0.032 |
| Codlein. phosph. . . | 0.1 | 0.3 | 0.075 | 0.3 | 0.1 | 0.3 | 0.13 |
| Ext. belladonn. . . | 0.05 | 0.1 | 0.03 | 0.1 | 0.05 | 0.12 | 0.065 |
| Ext. nuc. vom. . . | 0.03 | 0.1 | 0.04 | 0.1 | 0.03 | 0.1 | 0.06 |
| Chloral hydras . . . | 3.0 | 6.0 | 4.0 | 12.0 | 3.0 | 6.0 | 3.0 |
| Fowler's solution . . . | 0.6 | 1.5 | 0.5 | 1.5 | 0.5 | 1.5 | 0.48 |
| Opium . . . | 0.15 | 0.5 | 0.2 | 0.6 | 0.15 | 0.5 | 0.13 |
| Phenacetin . . . | | | | | 1.0 | 3.0 | 0.65 |
| Tinct. opil. . . | 1.5 | 5.0 | 2.0 | 6.0 | 1.0 | 3.0 | 1.8 or 9 |
| Morphin. hydrochlor. . . | 0.03 | 0.1 | 0.02 | 0.08 | 0.03 | 0.1 | 0.032 |

children ; for instance, a child of ten would have as maximum dose half the amount stated for an adult.

France.—The French Codex contains a very comprehensive table of maximum doses, but it is distinctly stated that these are given merely as information and denote amounts which it is advisable not to overstep. The doctor alone assumes full responsibility for his prescription, and this table is to have no influence on the findings of a Court of Law. On the other hand, should he wish to overstep the usual dose, he should denote that such is his intention, and not a *lapsus calami*, by adding the words "Jo dis."

Germany.—The list of maximum doses included in the German Pharmacopeia applies only to adults and affects amounts prescribed for internal use or in the form of a clyster or suppository. A higher dose may only be dispensed when it is followed by ! (point of exclamation). Should this sign be wanting, the dispenser must communicate with the doctor, or, failing this, reduce the amount to half the stated maximum dose, informing the doctor of the fact. Further, should a prescription contain an evident error, or be illegibly written, unsigned, or otherwise unsatisfactory, the apotheker shall communicate with the prescriber before making up the prescription (Baden). In Prussia under the same circumstances the apotheker is to reduce the amount to the maximum dose, and in the case of unsatisfactory prescriptions demand an explanation of the doctor, either orally or by means of a closed letter. If the doctor insists on the doubtful prescription being made up, it is to be dispensed at his responsibility, but the apotheker must inform the district medical officer, and, should it be prescribed by the latter, in that case pass it on to the President of the Provincial Council to be laid before the Government medical councillor. In Hamburg the dispenser is permitted to rectify minor errors or omissions (solvent or suspending agent), informing the doctor of the fact, should he not be able to consult him at the time. Prescriptions calling for doses likely to prove injurious or fatal may not be dispensed, even if the prescriber complies with the regulations, but the prescription is to be sent to the Government medical officer for his consideration. A prescription containing a potent drug may not be dispensed

A comparison of the amounts regarded by the above nations as being the highest safe doses to administer shows that there is a considerable degree of unanimity on this point—Italy, as regards caffeine, and Switzerland, in the case of cocaine hydrochl., being the most notable exceptions. A table of this kind naturally lessens the pharmacist's responsibility to a great extent by instructing him how to act in certain cases, yet it can have but a limited scope, for it can only apply to a restricted number of preparations, and as far as the rest are concerned he is practically as well off as if it were non-existent. Of course, where such far-reaching regulations prevail, as in Germany, which cast the whole responsibility of controlling the doctor's prescriptions on the pharmacist, there must necessarily be a well-organised apparatus of Government medical officers to act as expert exponents not only of the law but also on the question of therapeutics, and however beneficial they may prove to safeguard the health of the public, they contrast strikingly with the dignified and appreciative treatment meted out to the French practitioner.

DANYSZ BACILLUS.—The Lister Institute of Preventive Medicine have reported that, although this bacillus presents the closest resemblance to organisms which have been responsible for outbreaks of food poisoning, it is entirely different from the bacillus which occasions typhoid fever. The suspicion, therefore, which has arisen in some places that outbreaks of typhoid fever are due to the virus is without foundation. It is not, on the other hand, proven that the Danysz bacillus, if introduced into the alimentary canal, would be harmless to man. A few instances have been recorded which have led to the suspicion that the employment of this and similar viruses has been responsible for small outbreaks of acute and even fatal diarrhoea in man, but the evidence has not conclusively established the viruses as the causative factor. The extensive employment of the virus, in many places without ill result to mankind, shows that the danger of human infection, if it exists, is small.—*Colonial Office Journal*.

Dental Haemorrhage.

POST-EXTRACTION haemorrhage is a condition that, in the absence of doctor or dentist, a pharmacist may be asked to treat. Haemorrhage is either primary or secondary. In the former condition the patient is immediately under the control of the operator, who should see that the haemorrhage has practically stopped before allowing his patient to leave. Usually there is a very slight oozing of blood for some little time after the extraction, but in half an hour all bleeding should have stopped. Secondary haemorrhage may occur at any time, but generally sets in at night, and is much more serious. It may have arisen from a number of different factors—e.g., some hard substance in mastication may freshly open the wound, but coughing and vaso-dilatation are other causes. In this connection it should be remembered that persons who are bleeders (haemophiliacs) present a condition which has special dangers and which sometimes causes great anxiety. When a case of secondary haemorrhage is first seen it should be ascertained whether the bleeding proceeds from the gums or socket of the tooth, and whether the blood shows any tendency to coagulate. The socket should therefore be washed out with a warm solution (saline), and any partially-formed clots removed. Bleeding from the gums is best treated by a pad of cotton-wool dipped in some styptic, and pressure applied. This is, as a rule, sufficient. If the haemorrhage proceeds from the tooth-socket, plugging is necessary. It should here be kept in mind that the dental artery and its branches are so closely allied to the roots of the teeth that laceration of the artery in extracting a tooth is sometimes unavoidable. The cavity should be cleansed thoroughly, cones of cotton-wool dipped in some styptic, such as tincture of benzoin, then tannic acid, being pressed up the socket, then more pledgets of cotton-wool until the socket is full. Pressure is as beneficial in stopping the bleeding as the styptic. If necessary, a plug of lint may be placed over all, the patient asked to bite, keeping it in position by the opposing teeth, and a four-tailed bandage applied to keep the jaws firmly closed. The patient should be told to go home quietly, avoid all excitement, and not to lie down. Hot foods and alcohol should be avoided.

The drugs or remedies used to stop bleeding are :

Hot Water.—Intensely hot water is a good haemostatic, especially in hemophiliacs, the reason of this being, according to Dr. M. Guiland, that blood, having an insufficient amount of fibrinogen, coagulates at a temperature of 106° F. **Chloroform-water** is recommended by Spaak. He uses a 2-per-cent. solution and finds it to act rapidly. It has no disagreeable taste or odour, is not escharotic, and can be made as required.

Perchloride of Iron is an active coagulating agent in solutions 1 to 20 per cent. It is indicated where the blood is thin and watery with no tendency to coagulate. As a styptic, in the cases of haemorrhage from the gums, perchloride of iron should be avoided; it nearly always contains some free acid and it may lead to clotting in the veins or sloughing of the gums.

Tincture of Benzoin and Sandarac Varnish.—Dr. Candau, of Bordeaux, applied this very successfully in a case of secondary haemorrhage, in which the patient was almost at the point of exhaustion. The jaws were closed tightly on an additional tampon for pressure and a bandage applied to hold them immovable.

Potassium Permanganate.—Schädel ("Deutsche Med. Wochenschrift") says this should be employed in the form of a paste made by mixing it with 4 per cent. of vaseline. The part to which it is to be applied should first be thoroughly dried. Its application is only slightly painful. (This application is really of more use in the stopping of bleeding from warts, etc., than dentally.) Dr. Voerner ("La Odontologia") mixes two parts of pot. permang. with one of powdered talc, and a paste is made with vaseline. This is applied to the affected parts after they have been cleaned and dried as far as possible. To prevent the pain on application, he previously treats the area with cocaine solution. Permanganate being antiseptic there is not much danger of wound infection.

Adrenalin Chloride (1-1,000) is a powerful haemostatic and very useful, especially when applied to arrest a primary flow of blood. Although it has an intense vaso-constrictor action which is followed later by a passive vaso-dilatation, when used, as just mentioned, to arrest a primary bleeding, it is not conducive to secondary haemorrhage.

Veterinary Notes.

By A M.R.C.V.S.

Hide-cracks in Pigs.

HIDE-CRACKS is an affection to which the pig is liable during sunny weather. The skin becomes hard, reddened, and cracked from the animal basking in the sunlight, or it may be due to inattention to cleanliness. Diminution in weight and deterioration in value of the pig follow upon the intense irritation. The run of the sty should be covered with sacking or bracken during the hot weather, and the skin well washed with buttermilk. The following usually proves effective after a few applications when a little is rubbed daily into the affected parts :

| | | | |
|---------------------|-----|-----|-------------|
| Ac. hydrocyan. dil. | ... | ... | 3 <i>j.</i> |
| Potass. carb. | ... | ... | 3 <i>j.</i> |
| Ol. olivæ | ... | ... | 3 <i>x.</i> |
| Aquaæ | ... | ... | 3 <i>x.</i> |

Epsom salt, mixed with the food or drinking-water, keeps the bowels in order and reduces the fever.

Dog-troubles.

CATARRH (coryza or cold) affecting the head is a common and troublesome complaint to which the dog is subject. There is no doubt that it is a form of influenza, and it often accompanies distemper. The complaint is not usually dangerous, nor does it prove fatal in the majority of cases, but may develop seriously if neglected. The affected animal is more or less feverish with or without a discharge from the eyes and nostrils. There is also a certain amount of sneezing, and occasionally a sore throat is contracted. In treating such cases, give a mild dose of castor oil or glycerin. Keep the dog in a warm and even temperature and hold its head over a basin of hot water containing a teaspoonful of eucalyptus oil to each pint of water. The following mixture should be given in doses of one teaspoonful night and morning :

| | | | | |
|-------------------|-----|-----|-----|-------------|
| Tr. opii | ... | ... | ... | 3 <i>j.</i> |
| Tr. lavand. co. | ... | ... | ... | 3 <i>j.</i> |
| Tr. camph. co. | ... | ... | ... | 3 <i>v.</i> |
| Liq. ammon. acet. | ... | ... | ... | 3 <i>j.</i> |
| Syr. scillæ ad | ... | ... | ... | 3 <i>j.</i> |

If the throat seems to be much inflamed or painful a poultice of hot sand or salt tied round the neck close up to the head will gradually give relief.

ASTHMA claims its victims among dogs, especially old or pet dogs overfed with sweets and meat. The most striking symptom is difficulty in breathing. The respiratory movement is done by two apparent efforts, but the inspiration is performed with ease. Respiration is more difficult after feeding, being accompanied by a peculiar cough resembling a grunt. The animal does not thrive, and becomes pot-bellied. A good sharp purgative should be given, and the bowels kept open for some time. All luxuries must be withdrawn, only good food, such as porridge being given. If the patient cannot relish such simple food let it do without. A teaspoonful of the following mixture should be given twice daily or when breathing becomes painful and heavy :

| | | | | |
|-------------------|-----|-----|-----|-------------|
| Liq. arsenicalis | ... | ... | ... | 3 <i>j.</i> |
| Spt. aether. nit. | ... | ... | ... | 3 <i>j.</i> |
| Spt. ammon. arom. | ... | ... | ... | 3 <i>j.</i> |
| Syr. scillæ ad | ... | ... | ... | 3 <i>j.</i> |

COLIC is an ailment to which dogs are subject, although the fact is not generally known, as the animal has all appearance of being mad—the ignorant immediately pronouncing it as such. Treatment should begin with a good dose of a purgative followed by whisky, laudanum, chlorodyne or other anodyne at hand. Rub the stomach well and apply hot cloths at intervals, or preferably give a good warm bath, rubbing well while in the bath and dry thoroughly afterwards. Keep the dog warm and dry until purgation ensues. In after-feeding give small pieces of fish, beef-tea, soups, etc., to assist the stomach to recover normal action.

LATE NEWS—VERY!—When is a chemist's not a chemist's? When it is a Boots shop.

Buying and Selling.

By Jay Mack.

IN the last article on this subject (*C. & D.*, September 7, 1908, p. 410) I tried to show that the professional training of retail chemists required by the Pharmaceutical Society has unfitted men for the business which we chemists have to deal with day by day. I am told that it is not the duty of the Pharmaceutical Society to regulate the business training of young chemists; merely their knowledge of certain technical subjects specified by Act of Parliament. I know that, and I also know that there was nothing to prevent the Pharmaceutical Society using its influence in the commercial direction; while the facts of history are with me in my assertion that the steady enforcement of professional training, and the consequent concentration of the young chemists' interest in scientific subjects, have scotched the business or commercial spirit in our young men. The facts are clear beyond question that

Success in the retail drug-trade depends chiefly upon Buying and Selling. The training our apprentices require by law does not include buying and selling, and few of them want it or get it.

The majority of our young men are well into their twenties before they know the cardinal principles of business, especially *their* business. It is admittedly hopeless to expect reform in this direction from the Society; but I think it possible to readjust the "buying" on such lines that an ample margin will be left us for expenses and still meet the competition of companies and co-ops. But in order to see the need for any changes in "buying and selling" we must study the question fully. Companies have the same troubles as individual chemists: (1) Co-ops., (2) ill-taught men, and (3) rising markets; but they have many advantages over the chemists, viz. :

1. Bigger outlet enables them to buy better.
2. Their own factories save wholesalers' and travellers' costs.
3. Working from a centre allows them to have four outlets (four shops) with 500*t.* stock in each, as against the big chemist with the shop and 2,000*t.* stock.
4. Their system of stock-taking three or four times yearly prevents overloading and waste and loss.
5. Their style of business (everything ready packed) and the crowd of customers drives even the slowest men and keeps them working.
6. Absence of travellers leaves the manager nothing to do but sell and dress his windows and watch his staff, and sell and sell—and no making up: no messing.
7. The public crowd there, and that enables the company men to offer big wages and easy hours. Is it too much to suppose that they get many good men in return?
8. Any company who has half-a-dozen shops can buy "patents" direct, and thus get 20, 30, and 50 per cent. where the individual (unless he has a turnover of 50*t.* to 80*t.* weekly) has to be content with 10, 20, and 30 per cent.

Newly fitted shops show goods, not hide them, as many chemists do. New style windows being narrow give much show for little stuff, and the organisation keeps sight of expenses and waste; whereas the ordinary chemist does not even know his expenses, much less know how to prevent waste. He is sublimely unconscious of waste; how, then, could he prevent it?

It is only a year or two ago that every traveller you met asked the question: "Is Boots going to last?" Now, at a recent meeting of the Pharmaceutical Society it was openly admitted that "drug companies are here, and look like staying, and we must look facts in the face." It is no argument to say that this or that company has failed in the past or is in trouble now. Even if you take the biggest of all—Boots, Ltd.—and it failed to-morrow, why scores of men on the Stock Exchange would fight for the chance to buy it up! What for? Its 350 outlets all ready, staffs, and stocks; its factories in order, and, above all, its organisation to control the lot. What matters a temporary shortness of money or the presence or absence of any one man or dozen men to such a concern? Do you think the men who built and control that business forgot to prepare for human frailty, illness, or death? Just as well to settle these points first, for if chemists are living in the hope that some financial disaster is to remove drug companies, or that

some Act of Parliament is to throttle them, in order that we may benefit, so long will it be impossible for chemists to set their own houses in order.

But once let us get it firmly established that our difficulties can be removed, to our great mutual benefit, by ourselves, then the drug trade will take a new lease of life, and though even then many businesses must gradually disappear during the next twenty years, I am convinced that there are great possibilities in the drug trade, and a really good reward for those men who (1) really know the trade, (2) have sufficient capital, (3) keep good goods, and (4) sell them at right prices.

Companies are being very successfully competed with by chemists in every town: they even increase trade. I can mention three cases where big company shops are next door to chemists whose businesses have improved every day since the company came there; and I know one man who, when the company lease expired and they shifted 200 yards away from his, found a decided drop in his cash takings. The reason of this is that company shops, being big and prominent, tend to concentrate trade, especially in the centre of towns. It is quite possible that if a company shop opened in a suburb it might spoil the chemist trade there, but it is well known that companies do not seek after suburbs—they cannot live and keep up their big wages to their men unless they are right in the centre of a town and can get the cream of the trade.

With the co-operative society it is different. The co-op. says: "Spend your earnings with us; don't bother about economy, for the more you spend the more 'divi' you get; even when you bury your dear husband you get 'divi' on the coffin (if you buy it from us)."

How could we expect the working-class woman to resist that argument? The more she can drag out of the husband's weekly wage the more "divi" there is for her: it is her perquisite. But "divi" is not lost to the town or the country. It is very often taken out and spent among the other shops, such as drapers, milliners, tailors, and perhaps chemists. The husband loses (and the public-houses), and I feel sure that this "divi" business has contributed to the lessening of the drink traffic, which even the Budget has had to make allowance for and the temperance people take all the credit of.

Even when "divi" is not taken out it goes to the purpose of buying a house, and surely we cannot permit ourselves to rail against such a provision of thrift? It is still in the town, and not sent to Germany or elsewhere. The working-class public believe in co-ops., and until they can really discern for themselves between the true and the make-believe, and can save for themselves (as so many do even now) without having to go through a ridiculous process of buying bread or beef for the "divi" held out as an inducement, then we must put up with it, for it is a hopeless task to argue with women on most subjects, and "divi" is doubly so.

There was, and is, needless waste in senseless competitions among traders who supply the same people with a like kind of goods, inducing them to come to your shop (not the other man's) to buy your liver pills (not Jones's).

There is so much trade to be got, and no advertising or money spent will really create more trade; but, of course, if you talk loud enough and long enough you may take it from the other man, but often in so doing you spend 10*s.* to draw in 20*s.*, and that is waste.

I am not called upon to pronounce judgment on the co-op., but anything which induces thrift in the people is good, as also is any new method of trading which reduces hours of labour and does away with needless expense in the simple business of catering for the simple wants of the people.

They tell me co-ops. pay poor wages to their employés, and I can quite believe it when I see the snail's pace at which they work. Women leave their little children there to take their turn while they shop elsewhere, but if it suits these women we have no cause to grumble. There seems to be plenty of trade left for those of us who can organise and modernise our businesses, and if we take the educated, thinking man and woman of to-day who do not believe in the co-op., as typical of what the children of to-day will be like twenty years hence, then I do not think we need alarm ourselves, for the views of the educated class of to-day are certainly not in accord with the co-op.

Photographic Notes.

(By a Pharmaceutical Camerist.)

Origin of the Vignette.

A SHORT time ago I came across a description of an invention by John Edwin Mayall of an apparatus intended to "produce crayon-like effects on daguerrotypes." The apparatus consisted of a large screen having a star-shaped opening in the centre, which was revolved in front of the camera. This served to gradually cut off the light from the centre, and so produce a vignetted negative. A somewhat similar apparatus is at present in use in many photo-mechanical workshops for the purpose of producing half-tone photographs with softened edges. The original invention was patented in 1853.

One-solution Metol-quinol.

THERE is perhaps no developer so popular with a certain class of amateur photographers as a one-solution metol-quinol in a concentrated form. The following formula was recommended to me by a friend, and I pass it on to readers of the *C. & D.*:

| | | |
|-----------------------|-----|---------------------------------|
| Hydroquinone | ... | 5 grams |
| Metol | ... | 2.5 grams |
| Sodium sulphite xtal. | ... | 80 grams (or dried 40 grams) |
| Potassium carbonate | ... | 100 grams |
| Potassium bromide | ... | 2 grams |
| Water | ... | 500 c.c. |

Dissolve the metol first. For use mix one part with four or five parts of water.

It will be noticed that the quantity of metol is comparatively small. It is hardly necessary to point out this advantage to those who make developers for sale.

Page Phosphate Paper.

THIS new paper is the second of the class of photographic printing-papers which yield tones from black to brown on developing, and are handled in a similar way to "gas-light" papers. The exposure to daylight in a room, and at about 6 ft. from the window, is three to six seconds; at 12 in. from an incandescent gas-light, twenty to forty seconds; at 12 in. from a 16-c.p. electric lamp, $1\frac{1}{2}$ to three minutes. The developer is made as follows:

| | | | | |
|-------------|-----|-----|-----|-------------------|
| Metol | ... | ... | ... | $\frac{1}{4}$ oz. |
| Acetic acid | ... | ... | ... | $\frac{3}{4}$ oz. |
| Water | ... | ... | ... | 20 oz. |

For use add 1 part of this to 19 parts of water. A warm tone is obtained by using citric acid $\frac{1}{2}$ oz. in place of the acetic acid in the above formula. The fixing-bath is made thus :

| | | | |
|---------------------|-----|-----|-------------------|
| Sodium thiosulphate | ... | ... | 3 oz. |
| Sodium metasulphite | ... | ... | $\frac{1}{4}$ oz. |
| Water | ... | ... | 20 oz. |

The prints take about two minutes to develop, after which they are washed for a minute and fixed for not more than a minute, and then washed for half an hour in running water or several changes of water.

Colouring Photographs.

MISS ELSIE DEBENHAM, in the "British Journal of Photography," gives the following suggestions for colours to be used in painting photographs. The suggestions are worth noting with a view to advising customers as to the tints required :

COMPLEXIONS.—*Dark*: Venetian red and Roman ochre, with a little rose madder. *Fair*: scarlet vermillion or light red with pink madder, and Indian yellow or yellow ochre. *Shadow colour* (for deeper tones): Indian yellow or Venetian red or rose madder, each colour used separately according to complexion. The neck must be greyer than the face and slightly pink on the collar bones; arms, hands, and elbows pinkish.

Hair.—Put the colour on in masses, and if possible have a piece of the hair as guide. *Brown*: Light purple hue, shadows sepia. *Grey*: Cobalt or French blue with sepia. *Golden or flaxen*: Roman ochre and sepia; a little scarlet may be added. *Auburn*: High lights, little neutral tint and lake; shadows, burnt amber. *Chestnut*: High lights and very dark shadows, slightly purple; general colour, burnt amber and slate. Sepia may be added. *Red*: Venetian red and lake, or burnt sienna if not very red. *Black*: indigo lake and gamboge mixed, or lampblack modifies with lake or indigo according to colour.

Optical Observations.

(By A Chemist-Optician.)

Diploma in Ophthalmology.

THE University of Oxford has decided to institute a special diploma in ophthalmology as the result of an examination on diseases of the eye. This is a remarkable development of medical specialising, and the example of Oxford will probably be followed by other universities. In future when wanting a specialist in any disease the medical man will be chosen from the fact that he possesses diplomas in, say, skin-diseases or throat-troubles. It will be a method of distinguishing qualified medical men who have made a special study of certain diseases or particular organs of the body.

Mr. W. F. Stanley,

who died at South Norwood on August 14, was for fifty years the head of W. F. Stanley & Co., who are well known in the optical-instrument trade. In 1856 Mr. Stanley invented and placed on the market the first simple open stereoscope. Later he turned his attention to designing and manufacturing surveying and drawing instruments, and published text-books on these subjects. On retiring from business Mr. Stanley built the Stanley Technical Schools at South Norwood, and endowed them with property valued at 25,000*l.*

S.M.C. Examinations.

THE introduction of practical work into the elementary optical part of the Spectacle-makers' Company's examination will to a certain extent introduce a new element of difficulty for a section of the candidates. This is not so much due to the actual experiments themselves, which should present little difficulty to anyone with a scientific education, but rather to the fact that a good many students are unable to obtain the facilities for acquiring this practical knowledge and the ease of manipulation which is necessary to get the work done in the time allowed in the examination-room. In the first place, it is not work which enters at all into the daily routine of an ordinary refractionist's business, and to carry out the exercises requires apparatus which is seldom to be found except in the laboratories of large institutes or technical schools. It is only the favoured few who are able to avail themselves of these facilities.

Chemist-Opticians

are mostly men who, having successfully negotiated the very difficult Minor examination, and being in business for themselves, turn their attention to optics, and have to pursue their studies in the little time they are not at the counter. The chemists who have obtained their qualification under such conditions are entitled to great credit for having done so. The man with a practical turn of mind will have little difficulty in fixing up an optical bench at home, which will enable him to become familiar with the simpler experiments, such as measuring the focal length of concave mirrors, convex and concave lenses, and also the use of the grease-spot photometer, etc.; but the use of such instruments as the goniometer for measuring prism angles, the flicker photometer, and so on, is another matter, the cost of the apparatus rendering them prohibitive to individual students.

An Optical Bench

can be roughly improvised by two metre rules placed end to end to form the scale for measurements, and some supports for the lenses and screens. These supports can be made of blocks of wood two or three inches square, and having uprights about six inches high fixed into them with clips in the top to hold the lenses. The lenses and mirrors suitable for experimental purposes can be obtained at a moderate price from wholesale opticians, and should be about three inches in diameter. The screen for receiving images can be made from ground glass (a quarter-plate focussing-screen answers the purpose well); while another one can be ruled with lines in the form of a scale to act as an object. A small telescope is also required for taking observations of parallel rays. For illumination a candle or small lamp will answer; in laboratory work electric light is generally used. If some wholesale house would put a set of apparatus, including a list of experiments, on the market, it ought to find a ready sale among students.

Trade Notes.

MESSRS. G. S. MUMFORD & SONS, Newcastle Granary and Mills, Farringdon Road, London, E.C., have been appointed flour-merchants to the King.

SUNDRIES SALE.—The sale which is being held by Messrs. Alfred Cook & Co., Enfield, closes on August 31. Particulars were given in this journal on July 22.

WINDOW-DISPLAYS.—Messrs. Wright, Layman & Umney, Ltd., 48 Southwark Street, London, S.E., ask us to remind pharmacists, especially those at health resorts, that the present is a good time for window-displays of Wright's coal-tar soap.

CONFERENCE PHOTOGRAPHS.—Mr. John Cleworth, 56 Ducie Street, Oxford Street, Manchester, some of whose photographs taken at the British Pharmaceutical Conference have been reproduced in the *C. & D.*, asks us to state that he will be glad to supply copies at 1s. each.

MR. ENN BONTCHEFF, of Messrs. Bontcheff and Kidoff, proprietors and distillers of the "B. & K." brand otto of rose, Kazanlik, Bulgaria, is now in London on a business visit, and may be addressed c/o his agents, Messrs. Fredk. Boehm, Ltd., 16 Jewry Street, London, E.C.

COMPANY REGISTRATION.—Mr. Bernard Slack, Princes' Chambers, Wolverhampton, is developing the department of his business which undertakes the formalities needed for converting businesses into companies with limited liability. He has this week filed the papers for the registration of C. E. Harrods, Ltd., Parsons Green, London, S.W.

MESSRS. SHIRLEY BROS., LTD., Whitecross Works, Rockingham Street, London, S.E., ask us to state that any chemist who has not received a copy of their recently published price-list of sundries can have one by sending a postcard request. For customers abroad a system of code-words has been embodied in the list, which, with a private code, is intended to facilitate ordering by cable.

ZOTOS, the sea-sickness preventive, which is enjoying a boom during the present holiday season, is being put on the market in a family-size box—four times the size of the packages hitherto sold. The large size sells at half-a-guinea, and is protected at the full face value. Although this box contains four times the quantity of capsules as the ordinary size, the package is still handy in form for travellers.

SPENCE'S POISON REGISTER, which is published at Spence's Printing-works, High Street, Linlithgow, has just been brought out in the third edition. The register gives space for one entry only on each page, the book containing room for 200 entries. The Poison Schedule and sale requirements of the Poisons and Pharmacy Act and Arsenic Act are given in the beginning of the register. In the register proper a space is left for the signature of the vendor as required when selling arsenic. The register sells at 1s. 9d., postage extra.

RUBBER COAGULANT.—Mr. O. A. Elias, 123 Waller Road, New Cross, London, S.E., has given us particulars of a new process he has discovered for coagulating rubber latex, and which he is seeking to protect by patent in this and other countries. It is claimed that a rubber is obtained of uniform standard and staple quality, and the coagulation takes only a few minutes, against twenty-four hours required by most processes. Mr. Elias has studied the subject for some time, and is very enthusiastic about the new method.

A SMART LIST of chemists' specialities has just been brought out by the British Drug-houses, Ltd. (Barron, Harveys & Co., Davy Hill & Co., Hearon, Squire & Francis, and Hodgkinsons, Clarke & Co.). The list measures 9 $\frac{5}{8}$ by 7 $\frac{1}{4}$, contains 130 pages, and is bound in a bright-red, limp cover. A feature of the catalogue is the way it is illustrated by half-tone photographic blocks of each of the packed specialities. A description is given of each article, with prices, and the whole is made easy of access by means of a well-compiled index. This index gives not only the reference to the page where the particular speciality is described, but the size and price. The list includes galenical, domestic, and photographic articles and perfumes, and can be obtained by applying to Messrs. Hearon, Squire & Francis, 38 and 40 Southwark Street, London, S.E.

The Week's Poisonings.

FOURTEEN fatalities, including three misadventures, have been recorded from poisoning during the week. Kate L. Shakespeare (27), of Derby, who acted as dispenser to a local physician, poisoned herself by taking strichnine.—The same lethal agent was used at Bellarena, co. Derry, by Minnie Deehan, a domestic servant, who had been accused of stealing money.—The jury returned a verdict of death by misadventure at the inquest on Lilian A. Ross (23), a patient at Weymouth Sanatorium, who suffered from hysteria. The evidence showed that deceased took a quantity of biniodide-of-mercury solution out of a bowl on the doctor's washstand.—An accidental overdose of opium pills caused the death at Sussex Place, Regent's Park, of Mr. Hugh Erat Harrison (50), B.Sc., M.I.C.E., Principal of Faraday House, London, W.C.—A two-year-old child named Ellen Doyle died at Dublin from opium-poisoning. The infant obtained and drank some medicine which the mother had poured out for herself.—Harold R. Hartwright (34), a Liverpool carpenter, committed suicide by taking laudanum.—Annie Saunders took carbolic acid at Caerphilly with suicidal intent.—This poison was also taken by Wm. Mills, dairyman, at Dunmurry, Belfast, shortly after he had been discharged by his employer.—Peter Strand, labourer, died in the Liverpool Royal Infirmary from carbolic-acid poisoning. At the inquest the jury found a verdict of suicide while under the influence of drink.—The same poison was taken by an out-of-work labourer from Oldham, who was found dying in a lane at Stalybridge.—A street hawker named Robt. E. Alger (43), who was found on Hampstead Heath suffering from oxalic-acid poisoning, died a week later in the hospital. "Suicide while temporarily insane" was the verdict.—The same verdict was returned at the inquiry into the death of Isabel Sinclair (53), who died at Portsmouth from camphor-poisoning. A 4-oz. bottle of "camphor" was found in her room.—Mrs. Adriana Wyborn, wife of a Brighton physician, died from an overdose of veronal tablets. Her husband was not aware that deceased was taking the drug for insomnia. The jury said the evidence was insufficient to convince them that it was a case of misadventure.—Edward W. Petherwick (56), a Camden Town cabinetmaker, took a quantity of salt of lemon for suicidal purposes.

A Pharmaceutical Nursery-rhyme.

By a Brain-fagged Pharmacist.

Ten little pharmacists at Bloomsbury took the shine,
But one became a medico, and then there were nine.
Nine little pharmacists, but one got such a fright
When he saw the "new certificate" that there were
soon but eight.

Eight little pharmacists wished they were in heaven,
So one took a Codex pill—and left only seven.
Seven little pharmacists till one tried to mix
Potash chlor. and sulphur, and then there were six.
Six little pharmacists for high ideals strive,
But one fairly busted up—and left a sorry five.
Five little pharmacists found pharmacy a bore;
One threw up drugs for optics, and this left only four.
Four little pharmacists wouldn't take the *C. & D.*,
But they found it false economy, and soon numbered
three.

Three little pharmacists had a day at Kew;
One ate deadly nightshade, and this left only two.
Two little pharmacists heard Pentney make a pun;
The shock killed one of them, so that left only one.
One little pharmacist, the relic of his trade,
Developed melancholia, for no money had he made;
So he took up organising, Council suffrage tried to seek,
But a course of Hobbs and Gifford killed him off within
the week.

JAVA CINCHONA DIVIDEND.—The report of the Agricultural Company "Garret," of Java, states that the crop of cinchona in 1908 was 51,829 kilos, which realised 18,830fl. The net profit is only 1,589fl., against 3,011fl. deficit in 1907. The manager proposes to cultivate 50,000 kilos. of bark as long as the price remains so low.

MR. VICE-CONSUL GRAY, reporting on the trade of Bergen for 1908, states: "The production of sodium metal and caustic soda at the Vadheim Electro-chemiske Fabriker is reported to be steadily increasing. The output is chiefly shipped to the United Kingdom for Scottish purchasers, while the raw materials are imported chiefly from the United Kingdom."

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C., August 19.

THE drug and chemical markets continue to be characterised by dulness, but the feeling exists that better commercial conditions will prevail in the autumn. The chief feature this week is a further advance of fully 6d. in Turkey opium, due to extensive U.S.A. purchases, and on the spot there has been more demand at slightly enhanced values. Persian, on the other hand, is rather weaker. Apart from this, the only noteworthy features are further advances in glycerin and strychnine. Citric and tartaric acids show an improved consumptive demand, and some makers of lithia salts are less reluctant to sell at present low rates, anticipating an improvement. Copper sulphate is rather firmer; and crude camphor is steady. Among drugs, balsam tolu has been in more demand at steady rates. New Belgian chamomiles are arriving, but buyers as yet hold off. Copaiba is easier; and ergot is quiet but firm. Gamboge remains steady; and acacia gums are unaltered. Insect-flowers show a better inquiry. Bergamot oil is firmer on poor reports as to the growing crop; but lemon and orange oils are easier for shipment. New eucalyptus oil is arriving freely, but no change is anticipated, present prices being quite normal. Apricot-kernel oil is lower. New Tinnevelly senna will be offered in quantity next week. Tragacanth has been in fair demand, and serpentine is still scarce and high. Small supplies of vanilla at auction met with a good demand, and at the London cinchona-auction the average unit was unchanged, an insignificant quantity being offered. The chief changes have been as under :

| Higher | Firmer | Easier |
|----------------------|-----------------|--------------------|
| Coconut oil (Cochin) | Bergamot oil | Apricot-kernel oil |
| Glycerin | Cod-liver oil | Castor oil |
| Mace (W.I.) | Copper sulphate | Copajba |
| Opium (Turkey) | Resin | Lemon oil |
| Strychnine | Turpentine | Orange oil |
| | | Spearmint oil |

Cablegrams.

SMYRNA, August 16 :—Large sales of opium have been made at the equivalent of 11s. per lb. for 11 per cent. morphine. Market is excited and may probably advance a further shilling shortly. [This is an advance of 6d. on previous cabled prices.—ED.]

SMYRNA, August 19 :—Speculators have been buying, and the market has advanced to 11s. 4d. to 11s. 9d., with a still higher market expected when consumers respond.

NEW YORK, August 19 :—Business in drugs is moderate. Opium is irregular at \$4.15 per lb. for druggists' in case lots. Cascara sagrada is steadier at 8c. per lb. Hydrastis (golden seal) is steady at \$1.85. Podophyllum (mandrake) is firm at 8c. Central and South America copaiba remains easy at 42c. per lb. Peppermint oil is steady at \$1.45 for tins. Spearmint oil is quiet at \$1.75. Jalap is firm at 45c. per lb., and senega is lower at 41c.

London Markets.

ACID, CITRIC, is steady but quiet at 1s. 4d. for English and 1s. 3½d. to 1s. 3¾d. for foreign.

ACID, TARTARIC.—The chief dealers in tartaric acid say that "there is no such price as 9¾d." for foreign make for

delivery over next year, as stated in our last issue, the correct quotations being from 9½d. to 9¾d. for either forward or prompt delivery. English is obtainable at from 10½d. to 10¾d. The demand ex contract has somewhat improved this week.

BALSAM TOLU.—The lot of eighteen cases offered at auction last week has since been disposed of, the prices including fair hard at 10d. per lb.

BENZOIN.—The only arrival is one of 40 cases Sumatra from Singapore.

BUCHU.—Good green round is worth 1s. 6d. to 1s. 7d. per lb., and small sales are reported at these figures. Nine-bales have arrived and will probably be offered next week.

CAMPHOR.—China crude is steady, with sales of 100 piculs at 135s. e.i.f. for October-November shipment; near at hand is offered at 132s. 6d. c.i.f.

CAMPHOR (REFINED).—Small sales of Japanese refined 1 oz. tablets have been made at 1s. 8d., and for a parcel about landing 1s. 8d. is also asked.

CASCARA SAGRADA.—Spot is quiet but firm, with sellers asking 40s.

CASSIA.—At auction 127 bags Japan were offered, and 60 sold at 17s. Of cassia vera five bales were bought in at 40s.

CHAMOMILES.—Spot supplies of the new Belgian crop are now available at from 75s. to 77s. 6d. ex wharf, according to holder. Old crop is offered at 55s. for firsts and at 50s. for brownish.

CHILLIES.—At auction 138 bags Japan were bought in at from 38s. to 40s. for good red.

CINCHONA.—At auction on Tuesday only one catalogue was offered, consisting of 62 bales Java, weighing 10,230 lb., and 63 bales East Indian, weighing 18,679 lb. Of the Java bark 6,270 lb., and of the East Indian 7,488 lb., sold at previous unit value of 7½d. per lb. East Indian Ledgeriana stem chips sold at 2½d., Succirubra original stem chips at 3½d., and root, 4½d., Java, hybrid stem chips, 3½d., root 3½d., and branch 2½d. per lb. The 10,881 packages to be offered at auction at Amsterdam on August 26 weigh 998,371 kilos., the quinine-content of which is 62,194 kilos. The weight of the manufacturing-bark is 872,288 kilos., and the quinine-content 57,111 kilos., while the pharmaceutical bark weighs 126,083 kilos., and contains 10,881 kilos. quinine. The average percentage of the manufacturing-bark is 6.55, as compared with 6.24 per cent. in July and 6.43 per cent. in June. The exports from Java for the first half of August amounted to 752,000 Amst. lb., as against 726,000 Amst. lb. last year and 616,000 Amst. lb. in 1907.

CLOVES.—At auction 71 bales of Zanzibar were bought in at 4½d. for fair and 30 cases of Penang at from 1s. 2d. to 1s. 6d. for picked. Privately the delivery market for Zanzibar is dull, the sales including August-October at 4½d. and October-December at 4½d. For December-February shipment, business has been done at 4½d. c.i.f. d/w, closing sellers. Spot sales of Zanzibar have been made at 4½d.

COCA-LEAVES.—At the Amsterdam auction on August 26, 129 packages Java coca-leaves, weighing 7,233 kilos., will be offered.

COLOCYNTH.—The value of pulp is from 7½d. to 8½d. per lb., at which retail sales have been made.

COPAIBA.—Sales have been made at slightly easier rates, comprising Maracaibo (B.P.) at from 1s. 9½d. to 1s. 10d. per lb.

COPPER SULPHATE.—Quotations have fractionally improved to 18s. 15s. per ton for Liverpool brands for prompt delivery, and to 19s. to 19s. 5s. for December-February.

DRAGON'S-BLOOD.—Retail sales of good reboiled lump have been made at the full price of 12s. per cwt., but there is no demand for dull or bright seedy lump.

ERGOT.—In the absence of buyers prices are somewhat nominal, with sellers of Russian at 1s. 4d. per lb., usual terms.

GALLS.—Only retail sales have been made, on the basis of 55s. to 57s. 6d. for Persian blue, and for good green 47s. 6d. has been paid; holders of white have advanced their asking price to 44s. for spot parcels.

GAMBOGE is steady, with small sales of fair Siam pipe at 14*l.* per cwt., and for good hand-picked 14*l.* 15*s.* to 15*l.* is wanted, five cases of this quality having arrived.

GINGER.—At auction 238 packages of Jamaica were offered, of which about 120 sold at steady prices, including small washed at from 50*s.* to 51*s.*, and common mixed Rhatoon at from 47*s.* to 49*s.* Of Calicut 100 bags brown rough were bought in at 41*s.*

GLYCERIN.—The anticipated advance of 5*l.* per ton was announced on Wednesday, the official quotation now being on the basis of 85*l.* per ton naked for five-ton lots, and 89*l.* in 56-lb. tins and cases for double-distilled, e.g. 1,260 quality. The schedule of prices is now as follows :

| | | |
|------------------------------|---------------------------|-----------------------|
| 10 ewt. and under 20 cwt. | 1 ton and under 5 tons | 5 tons and upwards |
|------------------------------|---------------------------|-----------------------|

| | | | |
|---|---------|--------|---------|
| Contracts in mini- mum deliveries of | 2½ ewt. | 5 cwt. | 10 ewt. |
|---|---------|--------|---------|

| | s. d. | s. d. | s. d. |
|---------------|-------|-------|-------|
| 10-ewt. drums | 86 0 | 85 6 | 85 0 |
| 5-cwt. " | 86 6 | 86 0 | 85 6 |
| 2½-cwt. " | 87 0 | 86 6 | 86 0 |
| 1-cwt. " | 89 0 | 88 6 | 87 0 |
| 56-lb. tins " | 90 0 | 89 6 | 89 0 |
| 28-lb. " " | 91 6 | 91 0 | 90 6 |

GUM ARABIC.—Soudan gums are unaltered at from 29*s.* to 29*s.* 6*d.* for fair hard sorts on the spot. In East Indian gums the supplies of No. 1 Ghatti are extremely small, with No. 2 offering at from 16*s.* to 17*s.* per cwt. Senegal gum (Bas de Fleuve) is unaltered at 32*s.* 6*d.* spot or 29*s.* 6*d.* f.o.b. Bordeaux. Holders of Bushire so-called insoluble gum are firm, part blocky sorts offering at 13*s.* to 17*s.*, Mohainarah at 18*s.* to 22*s.* 6*d.*, and pale picked amber at 20*s.* to 24*s.*

INSECT-FLOWERS.—The demand, which has been much below the normal this year, has improved during the past few weeks, probably due to the hot weather. Prices in Trieste continue much above the London parity in spite of abstention of buying. On the spot, closed are offered at 175*s.*, half-closed at 145*s.*, and open at 120*s.* per cwt. The price of English ground powder from best closed flowers is about 1*s.* 10*d.* per lb.

IODINE.—A market letter from Yokohama states that iodine has practically shown no change in price of late. At the beginning of the year there were sellers at 3.65 yen for crude and 3.30 yen for potassium iodide, but since March prices have advanced owing to the short supply of kelp, and that tendency is still apparent, owing to the heavy rains having rendered much of the raw material useless. The current price for crude (July 15) is 3.85 yen per lb., and potassium 3.60 yen to 3.70 yen per lb., according to quantity.

IPECACUANHA. The Aragon, from Monte Video, has brought 21 bales Matto Grosso, and four of Cartagena have also arrived. The first-hand stock of Matto Grosso is 52 bales, much of it being of indifferent quality: good plump, which is scarce, is worth 6*s.*, ordinary being quoted 5*s.* 9*d.* Cartagena is quoted 4*s.* to 4*s.* 6*d.*, as to quality.

LITHIA CARBONATE.—It is stated that some of the makers are less reluctant to sell at present low and unremunerative rates, they looking for an early improvement; present prices for the carbonate salt is from 1*s.* 10½*d.* to 1*s.* 11*d.* per lb.

MACE.—At auction West Indian was dearer; 29 packages realising 1*s.* 9*d.* for fair pale and reddish, 1*s.* 5*d.* to 1*s.* 7*d.* for fair to good red, and 1*s.* to 1*s.* 3*d.* for broken. Small sales of Java in cases were made at 1*s.* 10*d.* for fair pale and 1*s.* 8*d.* for fair red. Wild Bombay was bought in at 5*d.*

MUSK.—Quiet. Fine blue skin Tonquin, Pile I., is offered at 68*s.* per oz., fair ditto at 65*s.*, and Pile III. at 50*s.* to 55*s.* Old-fashioned Pile I. is worth 55*s.*, and Pile III. 37*s.* 6*d.* per oz.

MYRRH.—Fair picked is worth 6*l.* per cwt., good Aden sorts 65*s.* to 70*s.*, and Somali ditto 60*s.* per cwt.

NUTMEGS.—At auction 112 packages of West Indian offered and sold at higher prices.

NUX VOMICA.—For a round lot of Bombay on the spot 6*s.* 9*d.* is wanted.

OIL, ANISED, is steady, with retail sales at 4*s.* 6*d.* spot; and to arrive 4*s.* 2½*d.* c.i.f. is quoted.

OIL, APRICOT-KERNEL, has been reduced 2*d.* per lb. by the manufacturers, who now quote 1*s.* per lb. net in cwt. lots. Apricot kernels have been more plentiful and are easier, in contradistinction to almonds, which remain dear.

OIL, BERGAMOT.—Reports which have been received from Sicily and Reggio indicate that the outlook for the forthcoming new crop is by no means favourable, and this, coupled with the small stocks, has led holders to become firmer in their ideas and less desirous to sell. This unfavourable news, however, requires verification, as it is yet too early to state definitely what the outcome will be. For shipment, high-grade oils are quoted at from 17*s.* 6*d.* to 18*s.* c.i.f., and on the spot from 17*s.* to 17*s.* 6*d.* is quoted in small parcels according to quantity and quality, with a retail business thereat. The small quantity of oil which has come on to the market this year has proved to be unusually high in ester-value, probably owing to the fact that it has been pressed from very ripe fruit; shipments have frequently averaged 38 to 40 per cent., and even 41 per cent., linyl acetate.

OIL, CASSIA.—Quiet. On the spot 80 to 85 per cent. e.a. is quoted 4*s.*, and 70 to 75 per cent. 3*s.* 9*d.*

OIL, COD-LIVER, has a slightly firmer tendency, with more inquiry for prompt shipment. Agents quote from 63*s.* to 65*s.* per barrel c.i.f. as to brand. Our Bergen correspondent writes on August 9 that the market is unchanged, transactions being few and small on the basis of 64*s.* per barrel c.i.f. for finest non-congealing oil. The exports from Bergen up to date amount to 7,948 barrels, against 10,668 barrels at the same date of last year. Writing further on August 16, our Bergen correspondent states that finest non-congealing Lofoten oil is still quoted 64*s.* per barrel c.i.f., at which price a small business is being done. The exports from Bergen up to date amount to 8,060 barrels, against 11,426 barrels at the corresponding date of 1908.

OIL, EUCALYPTUS.—The *Indraghiri* has brought 182 packages from Melbourne and the *Calchas* 174 cases from Melbourne and Adelaide. These are the first important arrivals of the new distillation. At this time of the year the demand is nominal at from 1*s.* to 1*s.* 2*d.* per lb. for B.P. oils as to cineol-content, and it is not anticipated that there will be any reduction.

OIL, LEMON.—In Sicily the market generally is quiet, with a small jobbing demand from abroad, and, so far as Palermo is concerned, both buyers and sellers maintain their position. Occasionally a small weak holder will realise at slightly below current prices, but if an urgent order for a definite quantity has to be filled, the full market-price has to be paid. The unfavourable weather in Europe has curtailed the demand for lemon oil this year, added to which large stocks accumulated in the United States, in anticipation of the tariff, have also influenced the course of business. For shipment 3*s.* 3*d.* to 3*s.* 4*d.* per lb. c.i.f. London is quoted, the latter price being for new oil for December shipment; on the spot 3*s.* 6*d.* to 3*s.* 9*d.* is quoted.

OIL, OLIVE.—The Acting British Consul at Milan reports that, according to the "Sole" (Milan) of August 8, the recent great heat appears to have damaged the olives in the provinces of Lecce and Gallipolino. The olives in Sicily, Sardinia, Bari, Foggia, Caserta, Lazio, and Lombardy are promising. In the Abruzzi the prospects are of a crop four times that of last year. Florence, Lucca, and Arezzo all promise well, but Umbria is likely to give a scanty output. Prices are sagging, although the prospects of a good crop presented a month ago are not maintained.

OILS (FIXED).—Linseed has advanced to 24*s.* 1½*d.* in pipes and 24*s.* 6*d.* in barrels. Rape is quiet and unaltered at 26*s.* for ordinary brown crude, the price of English refined in casks being 28*s.*, and Ravidon 24*s.* spot. Coconut oil is higher at 37*s.* on the spot for Cochin, and 34*s.* 3*d.* for Ceylon. Cottonseed is quiet at 23*s.* 6*d.* for crude, 24*s.* for ordinary pale refined, and 26*s.* 6*d.* for sweet refined. Soybean oil is about 1*s.* dearer at 21*s.* 3*d.* naked; Lagos Palm

oil is unaltered at 29s. American Turpentine has advanced 1s. on the week, closing firm at 38s. 6d. on the spot, and 39s. to 39s. 3d. for September-December delivery. Petroleum is quiet at 5½d. for Russian spot, 6d. to 6½d. for American, and 7d. to 7½d. for water white.

OLIBANUM.—Small sales have been made at from 26s. 6d. to 37s. 6d. per cwt. for middling to fair drop, and at 15s. for good garblings; stocks are becoming small.

OPIUM.—It will be seen from our Smyrna cable that large sales have been made, and that prices have advanced fully 6d. to 9d. per lb. on previous cabled rates. This has given the spot market a firmer tone, and small sales of good Turkey druggists' have been made at from 11s. 3d. to 12s. and Malatia at from 11s. 9d. to 12s. 9d. In Persian opium the quotation for over 10 per cent. is nominally 13s. 6d., and retail sales have been made at slightly easier figures. To-day cables from Smyrna quote 10½ to 10¾ per cent. morphine at 11s. 4d., a further advance.

A Smyrna correspondent writes on August 6 that the week has been very active, sales of new crop amounting to 110 cases, principally for the U.S.A. Prices commenced at 9s. 3d. to 9s. 6d. for current t.q., and at 9s. 9d. to 10s. 3d. for extra solested druggists', and ended at 10s. 3d. to 11s. 3d., or 1s. advance all round. The prospects are for still higher prices should the demand continue. It is now probable that the lowest prices have been seen, as the crop is officially estimated at 5,500 to 6,000 cases and stock 1,400 cases, against a crop last year of 3,800 to 4,300 cases and a stock of 2,280 cases. To-day's prices are from 10s. 3d. to 11s. 3d., as against 14s. 6d. to 17s. (August 1 to 7). The arrivals to date amount to 819 cases, against 1,001 cases. Another Smyrna correspondent writes on August 7 that the week has been very active, many buyers operating; but, in spite of this, all orders have not been executed. It is unfortunate that native speculators are interfering by spreading reports that the crops, of which a large proportion is now gathered, are not producing the yield expected, and that the estimate of the Turkey crop must be placed at 5,500 cases instead of the maximum 7,000 cases. To back their assertions they state that the arrivals at Smyrna and Constantinople amount to 1,585 cases, as against 1,533 cases last year at the same time. And this appears to be exact. Should the active demand continue, higher prices are expected in view of the extremely small stocks. The sales amount to 17 cases prime Karahissar at 9s. to 9s. 4d., 90 cases extra ditto at 9s. 9d. to 10s. 6d., and three cases Yerli at 10s. 6d. to 11s. Six of the above were for local speculators. Market closed firmly with buyers.

PEPPER (BLACK).—At auction 159 bags of Singapore were offered, and 34 sold steadily, including good at 3½d. and grey at 3½d. Privately the market for Singapore is firmer, the sales including September-November shipment at 3½d. and January-March at 3½d. d/w. The spot price for fair is 3½d.

PEPPER (WHITE).—At auction 164 bags Singapore were bought in at from 5½d. to 5½d. for good fair to good, and 118 bags of Muntok at 5½d. for fine. Privately the market for arrival is dearer, the sales including August shipment at 4½d. and September-November shipment at 4½d. and sellers. On the spot fair Singapore is offered at 5½d.

PIMENTO.—Nothing offered at auction. Privately, fair is quoted on the spot at from 2½d. to 2½d. per lb., and the price for distant shipment is nominally 21s. 6d. per cwt. c.i.f.

PODOPHYLLUM is firm and scarce, the spot value being 42s., and for shipment 42s. c.i.f. is quoted.

QUININE.—At the auction held by the Amsterdam Quinine-works on August 13, the equivalent of 50,000 oz. B.P. sulphate was offered, of which 10,000 oz. was sold at 10.50fl. per kilo., against 10.51fl. at the previous auction. The next auction will be held on September 3, when 50,000 oz. will be offered.

SARSAPARILLA.—Sales of grey Jamaica ex last auction have been made at 1s. 2d. to 1s. 3d. About 8 bales Lima-Jamaica have arrived, but so far no grey.

SENNA.—Arrival amounting in all to about 300 bales have taken place from Tuticorin, the bulk of which will be offered next week.

SHELLAC.—Quiet and unaltered; fair free TN orange selling on a basis of 75s. per cwt., while good and fine marks of orange are offered at 85s. to 95s., according to quality. A. C. Garnet is quoted 75s. for free, and GAL 67s. 6d. per cwt. The sales for arrival include 100 cases TN for

October-December shipment at 73s. c.i.f. A. C. Garnet is offered at 74s. c.i.f. Futures are about unchanged on the week; August selling at 76s., December 78s. to 76s., closing sellers of August at 76s. and December 76s.

STRYCHNINE.—The makers intimate a further advance of 4d. per oz. in the price of B.P. crystals and powder, and the prices of the salts show an advance of from ½d. to 3d. The quotations in bulk are now as follows: Crystals, 1s. 11d.; pulv., 1s. 10½d.; acetate, 2s. 0½d.; arsenite, 1s. 11d.; bisulphite, 1s. 5½d.; citrate, 2s. 1d.; hydrobromide, 2s. 1d.; hydriodide, 3s. 1d.; hydrochloride, 1s. 9d.; hypophosphite, 3s. 7½d.; nitrate, 1s. 6½d.; phosphate, 2s. 5½d.; and sulphate, 1s. 8½d. per oz. net; 100-oz. lots are quoted ½d. per oz. less. The above advance indicates the strength of the international convention, and there is practically nothing to be had in quantity outside the makers.

SULPHUR.—H.M. Consul at Palermo has forwarded to the Board of Trade Commercial Intelligence Department a copy of the "Rassegna dell' Industria Solfifera" of June 30, containing the text of the new Bill for the regulation of the sulphur industry, presented to the Italian Parliament by the Minister of Agriculture, Industry, and Commerce. The new Bill modifies and is intended to take the place of the laws of July 15, 1906, June 6, 1907, and July 5, 1908, relative to the institution of the obligatory "Consorzio" or Association of sulphur-mine owners, and is the fruit of the experience gained in the three years of practical working of that institution. The object of the principal modifications is: (1) To simplify administration and reduce the number of directors; (2) to authorise the "Consorzio" to cede to one party or company the sale of its total production for the whole term of the former's existence (twelve years from August 1, 1906); and (3) to restrict the output as far as possible to the consumption.

TRAGACANTH has been in fair demand at mostly steady prices, with occasional sales in favour of buyers. Bagdad qualities under 6l. per cwt. have been mostly sought after, the finer grades being neglected. There is little choice on the market, although stocks are large. Bagdad firsts are quoted 15l. 5s. to 16l., seconds 14l. to 14l. 15s., thirds 11l. to 13l., and fourths 8l. 10s. to 10l. per cwt.

VANILLA.—At auction only 111 tins were offered, of which 79 sold at full prices for good quality and at an advance of about 6d. for red foxy and split, the following prices being paid: Ceylon (45 tins sold), including good firsts, 7½ to 8 in., at 11s. 6d.; 7 to 8 in., 10s. to 10s. 6d.; 5 to 7 in., 8s. 9d. to 10s. 6d.; good split, 8s. 9d. to 9s., and red, 8s. to 8s. 5d. Seychelles (50 tins sold), comprising fair firsts, 6½ to 7 in., 9s. 3d.; fair seconds, 4 to 7 in., 8s.; split, firsts, 8s. 3d. to 9s. 3d.; brown and split, 8s. to 8s. 3d. Madagascar (4 tins sold), 4 to 5½ in., 8s., and various split at 8s., and of Mauritius, two tins sold at 11s. for leanish firsts and at 8s. for ordinary split.

WAX, CARNAUBA.—Brazilian holders ask prices much higher than buyers are prepared to pay, and business is almost at a standstill. The exports from Bahia during 1908 amounted to 797 metric tons, valued at 4,357l., against 733 tons in 1907.

WAX, JAPANESE.—The spot value is unaltered at 46s. 6d., and to arrive 43s. c.i.f. is quoted.

Heavy Chemicals.

Business in the heavy-chemical market is rather on the quiet side, with exports somewhat low. The general tone of the market, however, keeps steady, and values are well maintained and are without appreciable fluctuations.

SULPHATE OF AMMONIA.—This market is quiet as regards actual business, but inquiries are a trifle better. Present nearest figures: Beckton prompt, 11l. 7s. 6d.; Beckton terms, 10l. 18s. 9d. to 11l.; London, 10l. 18s. 9d. to 11l.; Leith, 11l. 5s. to 11l. 6s. 3d.; Liverpool, 11l. 1s. 3d. to 11l. 2s. 6d.; and Hull, 10l. 18s. 9d. to 11l. Makers' and buyers' ideas as regards forward do not show so great a divergence, but they are not yet sufficiently in accord to admit of any extensive transactions.

LEAD-PRODUCTS are steady and moving rather better. White acetate of lead, 23l. 10s. to 23l. 15s., and brown acetate of lead, 18l. 15s. to 19l.; nitrate of lead, 25l. 5s. to 25l. 10s., all less 2½ per cent. Glasgow. White lead, 16l. 5s. to 16l. 10s., and red lead, 15l. 5s. to 15l. 10s. per ton Tyne.

ALUMINA-PRODUCTS are somewhat quiet as regards new business, but contract deliveries are good. Crystal alum lump,

5*l.* 5*s.* to 5*l.* 12*s.* 6*d.*; lump in tierces, 5*l.* 10*s.* to 5*l.* 17*s.* 6*d.*; and ground in bags, 5*l.* 15*s.* to 6*l.* 2*s.* 6*d.* free on rails Lancashire and Yorkshire or f.o.b. Hull, Goole, or Liverpool. Sulphate of alumina, purest qualities, practically free of iron, ordinary strength, 4*l.* 12*s.* 6*d.* to 5*l.* 2*s.* 6*d.* per ton, delivery in ordinary casks with usual extras for similar pure quality in higher concentrations and ordinary allowances for bags and loose slabs. Hydrate of alumina, purest quality and highest strength Al₂O₃, 12*l.* 10*s.* to 13*l.* 10*s.* per ton free on rails in large casks. Special pulp hydrate of alumina, 15*s.* to 17*s.* 6*d.* per cwt. c.i.f.; special pulp quality dried and in lumps, 35*s.* to 37*s.* 6*d.* per cwt. e.i.f.; and ground, 37*s.* 6*d.* to 40*s.* per cwt. Aluminato of soda, purest quality and high strength, Al₂O₃, 27*s.* 6*d.* to 30*s.* per cwt. Carbonate of alumina, 32*s.* 6*d.* to 35*s.* per cwt. Aluminoferric, 50*s.* to 57*s.* 6*d.* per ton; and aluminous cake, 50*s.* to 57*s.* 6*d.* per ton, according to quality, quantity, and condition.

Manchester Chemical-market.

August 17.

Attendance on 'Change was limited owing to the continuance of holidays in Lancashire, and the tone was rather quiet. There was a better export demand reported for heavy chemicals, and high-strength caustic soda for early delivery was exceedingly scarce. There is no alteration in the United States tariff for bleaching-powder. Sulphate of copper was in better inquiry at about 10*s.* per ton advance on the week. Recovered sulphur remains steady at 4*l.* 12*s.* 6*d.* per ton on rails. White powdered arsenic was in excessive supply, and prices are from 12*l.* 5*s.* to 12*l.* 10*s.* per ton delivered Manchester. Lead salts are in demand. Foreign white is quoted 23*l.* 5*s.* and brown 19*l.* 5*s.* per ton, ex ship. Oxalic acid is in request at 2*l.* 6*d.* per lb. delivered Manchester. Brown acetate of lime is quoted 6*l.* 7*s.* 6*d.* to 6*l.* 12*s.* 6*d.* per ton, Manchester, and acetate of soda is quiet at 16*l.* per ton. In coal-tar products there is no new feature to report; quotations remain generally unchanged. Sulphate of ammonia is 10*l.* 16*s.* 3*d.* to 10*l.* 17*s.* 6*d.* per ton on rails, Manchester. Creosote is fractionally lower.

American Drug-market.

New York, August 10.

Seasonably quiet conditions continue to prevail in the New York drug-market. Now that the tariff question has been finally disposed of it is generally predicted that the early fall months will witness a return to normal commercial conditions.

ALOES.—Case Curaçao is in fair demand, but with a general distribution of supplies values are kept balanced at 6*l.* 2*c.* to 7*c.*, as formerly. Cape and gourd Curaçao are worth 8*c.* and 9*c.* respectively.

ASAFETIDA.—There is no abatement to the firmness of the spot market, and, owing to the continued scarcity of grades answering the U.S.P. requirements, a further advance in prices is probable. At present 60*c.* is generally quoted.

CANADA BALM is quiet at the recent reduction to \$6.25. Oregon is lower at \$1.10 barrel lots.

CASCARA SAGRADA is quiet and nominally unaltered at 8*c.* for spot supplies. Reports on the primary situation are conflicting, but owing to the weight of reserve stock, shortage or control of new bark is unlikely to enhance prices seriously for some time.

CHICORY continues scarce and firm at the comparatively high range of 48*c.* to 50*c.* for large quantities.

COPIBA.—Central and South American grades continue in good demand, but with plentiful supplies on hand prices continue easy at 42*l.* to 45*c.* Para sells at 50*c.* to 55*c.*, according to quality.

HYDRASTIS has been in active demand during the interval, principally for export, and most of the spring root has been eliminated from the spot market. The country position is reported slightly easier, but spot prices are maintained at \$1.80 for spring-dug and \$1.90 for fall.

JALAP.—While the situation with regard to supplies is not quite so keen, this market continues quite firm, drug of the relatively low grade of 7 per cent. being in good demand at 45*c.* The pronounced scarcity has attracted to this port supplies usually selected for distribution elsewhere, and some of these lots are of a richness seldom seen on this market, where 8 per cent. drug is considered something fine.

MANDRAKE continues in good request at 8*c.* as formerly. Most of the offerings are of poor grade, and holders of desirable stock are firm in their views.

OPIUM.—Demand is still backward in the absence of stimulating features. The increased tariff had of course been allowed for in advance, and prices are unaltered at \$4 for cases and \$4.05 for jobbing parcels.

PEPPERMINT OIL (AMERICAN).—"Tin" oil is in quiet demand at former prices of \$1.45 to \$1.50. The new crop is expected to be of good proportions, and with 100,000 lb. held over at primary sources appreciation of values is unlikely.

PERU BALM continues in good supply, and prices are easy at \$1.50 to \$1.65, according to grade and freedom from artificial product.

SENEGA is quiet and easy at 42*c.*

SERPENTARY is rather scarce in both spot and primary markets, and with a restriction of the gathering area predicted, dealers are firm in their views, anticipating higher prices. Meanwhile 50*c.* to 55*c.* can be done.

SPEARMINT OIL continues to react, owing to good crop prospects and a falling-off in the demand. Latest quotation is \$1.75.

Japanese Drug and Chemical Market.

Yokohama, July 15.

The drug and chemical trade has been very quiet during the past six months, owing to over-supplies and diminishing demand, while prices in many instances have been downward. In export articles, aniseed is firm at 7 yen, owing to small supply. Galls had practically no demand. Menthol this year opened at 4.10 yen per catty, and the demand for export was very much limited until quite recently. Then a few exporters began to buy at 4.10 yen to 4.50 yen, and finally as high as 4.80 yen to 5 yen per catty. It is estimated that 500 cases changed hands during one month, and present nominal quotation is 6 yen per catty. This is due to speculative purchases by European firms and continued bad weather. In import articles, changes in prices were generally in favour of buyers, owing to over-production and over-importation. Acetic acid (90-per-cent.) declined considerably. In January it was quoted at 25 sen per lb., in March it declined to 21½ sen per lb., and at present it can be bought at 20 sen per lb., although it costs about 24½ sen per lb. to import. Japanese production considerably exceeded the demand. On account of too heavy arrivals since January, carbolic-acid crystals fell rapidly, and there is no prospect of recovery. The present price is 26 sen per lb. for 40° to 42°, and 21 sen per lb. for 35°. Tartaric acid is lifeless, this being due to a heavy stock and absence of demand. The best P.J. III. quality can be obtainable at 56 sen per lb. The market for bismuth subnitrate continues low at 3.50 yen per lb., which leaves no margin of profit to importers. On account of very heavy imports since last year, the present stock of bromides is estimated to cover requirements for next two years. The price is about 15 per cent. lower than that ruling in Europe. Potassium bromide is quoted at 50 sen, and soda at 53 sen per lb. As to cocaine, although the price in the European market is higher, our prices are lower, owing to a heavy stock. The present price is 5.10 yen per oz. Glycerin continues to advance on account of a short supply. At present the nominal price is 39 sen per lb. in 10-cwt. drums.

Java Cinchona.

At a meeting of the Preanger Cinchona combination on July 5, it was agreed in principle to offer a prize for a fixed method of pure bark-analysis. The prize will consist of a sum not less than 500fl. (about 42*l.*), and Messrs. Van Leersum and Connemlyn will consult about this and report later. After this Mr. Van Riemsdyk gave an address on a subject which has already so often been discussed—i.e., the possibility of artificially reducing the crop on account of the low cinchona unit. His conclusion was that it was necessary to reduce the crop about 25 per cent. All the other members present, however, were of opinion that this plan was impossible of execution, and after this the proposal of Mr. Koch was again brought forward, under which 6*c.* per unit is to be guaranteed to the planters. The only reason why this proposal was not carried into effect is that the directors of the Bandong Quinine-works refuse to join. The proposal, as is well known, is that a combination of quinine manufacturers and planters, under the leadership of Mr. Koch, want to ascertain the amount of bark which ought to be produced in order to obtain this minimum, the idea being that the total of the production should be allotted in definite proportions to the planters with a minimum guarantee of 6*c.* and any excess to be divided in proportion. Any planter who would refuse to join is to be boycotted, and will therefore be unable to sell anything. The idea is now to force the Bandong works to join, giving them a limit of three months, after which the combined planters will refuse to supply them with any more bark. The Government, however, supplies a considerable portion of its bark to the factory, and it is now intended to memorialise the Government and ask them to refuse to sell any more bark to the Bandong works. It is said that in principle the Government are favourably impressed with this idea.

Korean Ginseng Monopoly.

Viscount Sone, the new Japanese Resident-General in Korea, has decided to create a special monopoly department for ginseng. This idea will be carried out upon the expiry of the current contract with the Mitsui Bussan Kaisha, which has hitherto enjoyed the sole agency and transacted the business in the article in Korea and China to the extent of three to five million yen per annum.



TO CORRESPONDENTS.—A letter for publication should always be a distinct communication; nothing else should be mixed up with it. Each query—no matter whether legal, dispensing, or general—should stand by itself, and the paper upon which it is written should always be backed with the shop stamp. We do not undertake to reply to queries by post. Write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. Publication of letters does not imply our agreement with them. Letters received after Wednesday morning cannot as a rule be dealt with in the current week's issue.

BUSINESS INFORMATION.—We supply by post (when a stamped and addressed envelope is provided) information as to the makers or agents for articles connected with Pharmacy and the chemical and drug trades. Inquiries regarding any articles which cannot be traced are inserted under "Information Wanted."

Store-prices.

SIR.—In reference to the letter of "Wondering" in the *C. & D.*, August 14, p. 325, we do, and always have done, everything in our power to secure for the retail chemist the full dispensing profit on palatinoids, bipalatinoids, and other of our manufactures. For this reason the formula on the label is in Latin, no particulars of its therapeutic uses are included, and the dosage is left to the physician—in fact, everything is done to induce the chemist to replace this label with his own, as in an ordinary prescription. We cannot prevent him (or anyone else) from retailing it as an ordinary package if he be so disposed, but we do everything to hinder this. We are only too anxious to receive suggestions from chemists with view to keeping our preparations solely as dispensing articles, and a glance at "Our Policy" advertisements will convince "Wondering" that the above has always been our aim. The editorial note under his letter gives a possible reason for the discrepancy in this particular case—viz., that an ordinary order for a one-gross bottle was given to the Stores, and it was not "dispensed." The same difference might occur with any pharmacopœial drug—for example, a prescription for pil. rhei co. would not be dispensed at the same price as a customer would pay who asked for a box of rhubarb pills.

Yours faithfully,

OPPENHEIMER, SON & CO., LTD.
179 Queen Victoria Street, London, E.C.

Essential-oil Adulteration.

SIR.—The emphatic protest of Mr. John Umney in the *C. & D.* (August 14, p. 292) should have the strongest support of all interested in the essential-oil industry. Above all, it should have the most earnest consideration of all consumers of oils, firstly, on account of its insistence on the necessity, in testing oils, of the trained sense of smell working in conjunction with the analyst, and, secondly, because of its exposure of the methods of unscrupulous manufacturers of and dealers in oils, and of the unfair and dishonest competition thus resulting in the trade. The analytical chemist, who is there to protect the consumer, and, incidentally, of course, to assist the honest dealer or manufacturer against the sophisticator, often becomes the unwilling tool of the latter, through reasons already sufficiently dealt with by Mr. Umney. I should like, in fairness to the makers of the body known as terpinolene, to say that they brought it out quite openly, and first offered it to consumers, many of whom did not even wish to see a sample, in spite of the possibilities suggested by the low price. Unlike triacetin, terpinolene has a distinct odour-value. It would no doubt, from Mr. Umney's description of the odour and of its physical constants, blend excellently with spike lavender oil, and it would also require an expert to detect the adulteration. I should like to know if this mixture was sold as pure. I should say it was from my own experience of certain sellers who supplied impure oils, "guaranteed pure." When the oils are rejected the sellers

try to concentrate the dispute on a quibble as to certain constants of the oils in question, supporting them with statements made by chemists here and abroad. The figures are usually almost perfect, but unfortunately they do not make the odour right. All the disputes were finally settled in my favour on the score of odour alone. Curiously enough, on the same page of the *C. & D.* in which Mr. Umney's protest is made, there appears an article by Mr. Parry, according to which the adulteration of otto of rose is being carried on to a very great extent this year. Mr. Parry gives figures of five oils sold (? offered) as guaranteed pure, but which he finds to be impure. It occurs every season with nearly every oil, but especially, it would seem, with otto of rose, that a large number of samples of new season's oils are rejected by the leading chemists. Are these samples perhaps only submitted to see if some new mixture which the sophisticator has discovered will pass the vigilant eye of the chemist or not? This brings me to the root of the real trouble—namely, the guaranteeing of oils as pure which are known to be adulterated. A man may mix oils as much as he likes—this is not wrong in itself; but the unfairness and dishonesty come in when these compounds are palmed off as pure oils in competition with genuine products. A buyer treating both these sellers with due respect immediately informs the party offering the genuine product that he is too dear. This abuse and fraudulent dealing can only be dealt with by the combined efforts of manufacturer, dealer, chemist, and consumer. The manufacturer always knows, and the dealer mostly knows—if he knows anything at all about the articles he is handling—whether the products are genuine or not. They are usually in a position to obtain knowledge and information which the consumer or chemist cannot so readily obtain. On the other hand, there are difficulties in the way of imparting such information to the consumers, but a number of them would disappear if the consumers would really make a point of actually buying the very best pure qualities obtainable, and not only "moderately good," or, as is often the case, the cheapest qualities, which answer the text-book requirements for purity as far as physical constants are concerned. This, of course, is the result of trying to let the analytical chemist's work also do for the work of the nose. The nose is not used half enough in testing oils. While some oils require hours to test, others require to be smelt for days, at intervals, before their value can be determined. A few examples will illustrate the working of the essential-oil trade. If an oil is worth 20s., there are always sellers at 14s. to 16s.; or, coming to finer adulterations, if it is worth 2s. 6d., there are sellers at 2s. 3d. In the case of some articles, of which the import (cost) prices are regularly published, there are mostly resellers at those self-same cost-prices. Often second-hands can sell a line, "guaranteed pure," to a consumer at a price with which first-hands cannot compete. This state of affairs is not to the interests of a consumer, and it is bad for a firm which guarantees its sophisticated goods as pure. The practice is to the disadvantage of everybody. Trade is made difficult, unnecessarily complicated, and a lack of confidence between buyer and seller results. More courage is required on the part of the seller of the oil. It is his lot to introduce the right article, and he must not expect the analytical chemist alone to do it for him. Nor should the consumer expect the analyst to do the work of the nose. If this does not eventually eliminate sophistication to some extent, the consumer has other effective weapons at his disposal.

Yours truly,
63 Bartholomew Close, London, E.C. W. NAUMANN.

The Supply of Citric Materials.

SIR.—In your issue of July 3 (p. 33) you were good enough to publish a letter from me in regard to the working of the Camera Agrumaria. I now beg to inform you that at the last meeting of the directors several important decisions were reached. Up to now citrate of lime and concentrated lemon-juice have been offered by exporters at different prices, with great prejudice to our institution, which, having the control of the market, is obliged to maintain a stable price for all. Insinuations have continually been made against the Camera, and the makers of citric acid have been led to believe that the Camera Agrumaria may and ought to cease, and that at its termination prices of

citric materials would undergo a heavy decline. Such unfounded reports have not alone damaged the interests of the Camera Agrumaria, but also those of citric-acid makers, towards whom the Camera Agrumaria has the best intentions. In order to obviate this inconvenience, the Camera has reserved to itself the privilege of making sales abroad, so that exporters cannot offer any more freely, except by paying the tax for some free parcels of citrate or juice, such parcels being very limited. The Camera will sell to consumers directly or through agents, and the price will be the same for all, varying only as to freight according to destination. The actual price fixed by the Chamber is:

| <i>Citrate of Lime.</i> | <i>Concentrated Lemon-juice.</i> |
|----------------------------|----------------------------------|
| <i>£ s. d.</i> | <i>£ s. d.</i> |
| 20 12 6 c. and f. London | 21 0 0 c. and f. London |
| 20 17 6 c. and f. New York | 21 2 6 c. and f. Liverpool |
| | 21 2 6 c. and f. Glasgow |
| | 21 7 6 c. and f. Manchester |

on usual conditions and analysis by Messrs. Ogston & Moore, Catania or London. The Camera will entrust the execution of the orders received to reliable firms well known to foreign manufacturers. They will also grant these houses a commission on forfeit, and these firms will have to take all risks and guarantees and pay prompt cash to the Camera previous to shipment. The Camera, wishing to protect buyers against any possible decline in price over a long period, guarantees for that purpose that its prices will not be reduced until February 1910, and all sales made are understood to be under this formal guarantee. The Camera, taking into consideration the condition of the market and the wishes of citric-acid makers, have fixed the minimum price for the new production of citrate and juice at the equivalent of about 17*l.* 10*s.* c. and f. London, but, as explained in the letter published in THE CHEMIST AND DRUGGIST of July 3, this price cannot come into force until all existing stocks held by the Camera are exhausted, as that body is obliged by law to pay to depositors on the basis of the actual guaranteed minimum price. The Camera has agreed to the foundation of an Agrumaria Banking Institution, which will facilitate very much the task and the attainment of the purpose for which it has been instituted by the Italian Government.

Yours faithfully,

GIOV. SCACCIANOCE,

Director of the Camera Agrumaria.

Palermo, August 11.

The Future.

SIR.—The future concerns me most: we have all had enough of the past, with its want of method. Think of the old wire files and the trouble it was to hunt through them for receipts; contrast with this the new index files. I could multiply instances of obsolete procedure such as this by the hundred. The whole future of us all is tied up with the general prosperity of the nation. Politically have we not protected ourselves against the foreign patentee, so that now goods sold in England under an English patent must be made in England. This has given work to thousands of men, and incidentally led to the employment of many chemists. Education has increased the needs of the people: trade has broadened for all of us. Divide the trade into sections and examine the prosperity of each and all in drugs and sundries, and in weekly takings—(1) big company shops doing 70*l.* to 100*l.*; (2) big private chemists doing 70*l.* to 100*l.*; (3) private chemists doing 40*l.* to 50*l.*; (4) private chemists doing 15*l.* to 20*l.* Sections 1, 2, and 3 never wail—they are too busy drawing the cash: does anyone suggest there is no future for them? Section 4 makes, on the average, 250*l.* to 300*l.* a year. Many of them have a comfortable house attached, which makes life in the midst of one's family much more congenial; and when they pursue the partly personal business with a well-selected general mixed stock, they save money and are prosperous. It is only that part of them who, failing to gauge their district, try to compete with the bigger men, buy direct, and burn their fingers generally. There is no need to talk of the stock problem just now; men are learning their lesson in a rough school for themselves. If anyone doubts the prosperity of these men, go and try to buy one of these businesses. Tell him the days of goodwill are over. He will be inclined to kick you out of his shop, especially if he keeps books, has a modern, well-fitted shop in a good

position, and is making a steady income. Why should he turn it over to you without goodwill? Goodwill is a tangible asset; even companies doing a non-personality trade value it at 200*l.* to 300*l.* per shop, and I would far sooner pay goodwill than take over 500*l.* dirty old stock at half cost. If you pay 100*l.* goodwill and the net profit is 300*l.*, you can surely live on 150*l.* and save your goodwill in the first year's trading. If you attend to business, keep on modernising the place, giving people what they want, surely it is reasonable to suppose your goodwill will at least retain its value. "Pharmacist" does not appreciate 150*l.* a year, but I say it is good wages for the men who get it. Was there such a chance for men twenty years ago? Many men save out of this salary, and, knowing there is more to be made in a business of their own, they have the pluck and the initiative necessary to tackle the difficulties and start on their own account. If they have not the initiative, they are certainly better as assistants. Those who stay on presumably like the routine, the regular wage, and absence of anxiety—anxiety is due mainly to a man's own wrong policy in business. The whole nation is under repair, and my hopes for the future lie in the following points:

- (1) Wholesalers meeting us better than formerly. If we went under they would go also.
- (2) Wants of the public increasing.
- (3) Cut-throat competition nearly over.
- (4) The Society seems likely to help us.
- (5) Fairchild and others prodding on our apprentices.
- (6) Rents and rates at the top and likely to go down.
- (7) Get rid of the professional incubus.
- (8) We are developing into scientific business men.

Even the doctors at the Belfast Congress say their curriculum is wrong: little wonder that our leaders have wrongly followed in the doctors' footsteps.

JAY MACK.

Apothecaries' Assistants.

SIR.—As obviously it was intended by the promoters as well as the supporters of the Poisons and Pharmacy Act, 1908, that Section 4 (b) should not remain, virtually, a dead letter, it would be well to consider upon what grounds a compromise could be effected that would be prejudicial to none of the parties concerned. I suggest that such an arrangement could be effected on an examination basis only. It is generally conceded that the examination of the Apothecaries' Hall, taken *in toto*, is inferior to the Minor examination of the Pharmaceutical Society as a criterion of educational ability. Still, it is comprehensive enough to satisfy medical men as to the ability of the holder of the assistant's certificate to dispense medicines; hence it would be folly to class these men and women holders of the certificate as altogether uneducated pharmaceutically. I suggest, then, that the subjects, say, of dispensing and *materia medica*, and any other which is considered to be of an equal standard to that required for the Minor examination, should be credited to the holders of the Apothecaries' Hall certificate as a pass in that portion of the Minor curriculum. On production of a certificate of preliminary education, and a declaration that they have been engaged in dispensing medicines for a definite period, they would then be eligible to enter for the remaining portions of the Minor examination. By adopting such a course there would be no injustice to any of those now on the register of chemists and druggists. At the same time it would be a compromise between those who, on the one hand, would rule out the claims of the apothecaries' assistants entirely, and those who, misunderstanding the discretionary powers vested in Section 4 (b) of the Poisons and Pharmacy Act, are crying out for registration. If there are any reasonable objectors to such a course their views would much interest

A. SCOTTIE. (135/53.)

The Proprietaries Puzzle.

SIR.—The problem "Yorkshire Bite" has propounded is worthy the consideration of pharmacists at the present time, and is one that each must answer for himself after duly considering the *pros* and *cons* applicable to his particular case. Some pharmacists are very successful in introducing "own specialities," and make these goods a very profitable department of the business. Many, on the other hand, have not been so happy in their experience. The essentials are: (1) The article must be the best of its kind obtainable; (2) the "get-up" must be worthy of the

speciality; (3) tact and perseverance in introducing and keeping the article running. Many of us fail in one or other of these essentials, and fall back upon something ready to hand, thus unconsciously building up the property of the proprietor of a patent medicine and putting him in a position to supply our keenest competitors. The trend of opinion is undoubtedly in the direction of co-operation, and if the U.C.A.L. scheme is ably started and well supported there is no doubt it will be a success.

PHARMACY FOR THE PHARMACIST. (139/31.)

SIR.—Your correspondent "Yorkshire Bite" asks for experience as to pushing other people's proprietary articles. "Stock anything that sells" seems to me sound advice, with an occasional *lapses* to give your own goods a chance. Do not be too often out of stock. But pushing is another question. Now for experience—*Experientia docet*. I pushed a certain proprietary milk (unprotected), getting 5d. per tin and thereby a reasonable profit. A doctor in the town began ordering it (I believe, from my recommendation), and induced a grocery branch of the local co-operative stores to stock it, sending customers there for it. The co-operative charged 5d. per tin and gave "divi," reducing the price to 4s. 3*½*d. per dozen; wholesale price, 4s. 5d. per dozen; three-case lots, 4s. : Puzzle, where did my customers get the milk? I took over the special agency for a corn-cure and a patent food, and worked up a reasonable sale. The makers of the corn-cure commenced advertising in newspapers, and informed me that, as they were spending largely in advertising, special agencies could no longer be recognised. The makers of the food simply supplied other traders near, without any explanation, when a certain amount of trade was worked up. Puzzle: What was the use of the agency to me? In this delightful village of thirty thousand souls the prices of privately protected articles were, so far as I am aware, religiously observed by drug-stores and chemists, although the grocery co-ops. were as small thorns in our sides on account of giving "divi" on protected rates. Presently the wise-aces of the co-operative camp decided that they could make a profit out of a chemist's department run on a basis of cut rates. The prices of many privately protected goods are now cut in this town, and rightly so if the co-operative stores are to be allowed to give a dividend on protected rates. Puzzle: Who are the makers protecting, the co-ops. or chemists? The P.A.T.A. are just now fighting the co-operative committee in their attempt at what trade unionists would call "black-legging"—that is, selling P.A.T.A. goods and giving dividends on them. A particularly keen instance in connection with this is that a chemist in the town had made a certain range of protected goods run by a large wholesale house into specialities to push as his own. The wholesale house supplied the co-operative stores chemists' department with the lot, and now the goods are sold at usual rates with "divi" off. Puzzle: Whom can you trust?

Yours,

H. MORTIMER.

SIR.—The United Chemists' Association, Ltd., of which I am one of the Hon. Secretaries, is engaged in solving the problem put forward by "Yorkshire Bite" (*C. & D.*, August 14, p. 324). There are two ways of regarding this problem—viz., (1) from the point of view of self, pure and simple; (2) from the point of view of strengthening the ranks of pharmacy as a whole, self coming in along with the rest. Pioneers have always difficulties to overcome, and it is from the ranks of those who hold selfish views that the pioneers of this movement have to look for difficulties. These consist mainly of apathy, jealousy, greed, and a lack of *esprit de corps*. The selfish man's views are narrow and cramped, and the news that his brother chip up the street is giving six pills for a penny as against his four causes a feeling of alarm. The sorry spectacle of two dogs fighting for the proverbial bone is well illustrated, and not only does the non-pugilist secure the bone, but also in many cases mains the two contestants for life. There is, again, the man who argues for personality and individuality as being the backbone of success; sell your own proprietaries and don't sell co-operatives' proprietaries which can be sold by Jones up the street, is what he says. Make a name for your own proprietaries and do a mail order business. What is personality? A something which is peculiar and apper-

tains to a person. How, then, can we account for the success of the impersonal drug-companies? Personality does not exist here; whence, then, are we to look for it? I do not write as a champion of the drug-companies, and so am precluded from naming all the directions in which we must look, but one of them is certainly that a customer can buy the same proprietary at the same price in a number of shops, and is not asked to take a dozen different ones in as many shops. Note carefully, too, that these proprietaries will rarely bear the company's name, which further emphasises the possibility of big things without the much-vaunted personality. The men comprised in the second section are those with broader views, and, while open to admit that personality, in some branches, is a valuable asset, will not concede that personality would be destroyed by co-operation *inter se*, but that it would be strengthened by it, from the very fact that, at just those points where extensive competition has to be met, the association would be there to assist him. Advertisement is the greatest of all levers in business to-day—brisk, crisp, catchy advertisements, and window-shows on like lines. Our population is to-day largely a shifting one, and hence the one-pharmacy man must often spend much time on securing a customer for one of his preparations, only to lose him again when he leaves the town. Contrast this with the company chemist having numerous branches, or with men selling U.C.A.L. proprietaries.

Yours faithfully,

CHAS. C. CADGE.

Dispensing Notes.

A Difficult Inhalant.

SIR.—Referring to the note with above heading in the *C. & D.*, August 14, p. 325, I find that the oil of cassia, unless it is absolutely newly distilled, combines with the mag. carb. and forms a curd, probably partly a cinnamate. I have made large quantities of the inhalant, and take the liberty of giving you my method of procedure, which produces a most satisfactory result:

Put fifteen or twenty grains of sodium bicarbonate in a mortar and rub with about one drachm of distilled water; then rub up with the oil of cassia and stand for a few minutes, after which add more water and about thirty grains mag. carb. levig.; put into a 3-oz. bottle, agitate, add the benzine, and fill up. Twenty grains of mag. carb. will do equally well.

The result is an inhalant which does not separate for a week.

Yours faithfully,

DAYLIGHT. (138/26.)

Legal Queries.

Before submitting questions for reply in this section please refer to the "C. & D. Diary, 1909" for the following subjects: Income-tax, p. 220; Pharmacy Law and Poisons, p. 216, (abroad) p. 211; Spirit Laws, p. 229; Stamped Medicines, p. 221; Trade-marks, p. 194; Wines, Sale of, p. 231; and Legal matters generally, p. 233.

Pharmacist (136/39).—We consider that a drug-store belonging to a pharmacist is a branch shop, and that it must be managed by a qualified chemist. The point is not the sale of poisons, but the carrying-on of "the business of a chemist and druggist."

A. F. B. (139/39).—(1) There is no calomel in *lotio nigra*: the mercury exists as black oxide. (2) The exemption in the Medicine-stamp Acts in regard to the sale of "known, admitted, and approved remedies" applies to any person who has served a regular apprenticeship. See *C. & D. Diary*, p. 222, for further particulars.

Phynn (133/20).—RESTRICTIVE AGREEMENTS cannot be enforced against infants (persons under twenty-one years of age). It is the special privilege of an infant that he can repudiate as invalid all contracts made by him which are not to his advantage, while he may enforce against the other party those which are to his advantage.

Westbourne (127/40).—LABEL LIABILITY.—The use of the words "antiseptic and astringent" render the eye-lotion liable to stamp-duty. If, however, the formula is contained in a recognised formulary and the reference to it is given on the label, you, as a qualified chemist, would not need to stamp it, as the eye-lotion then becomes a "known, admitted, and approved remedy." We publish such formulæ annually in *The Chemists' and Druggists' Diary*.

Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months. A preliminary condition for reporting on samples submitted is that all particulars as to source and uses are given to us.

R. W. & Co. (132/36).—**SWEET OIL.** is generally colza oil, but some chemists supply olive oil. The expression has not a definite meaning.

White Rose (Trinidad) (131/57).—**KEEPING LEECHES.**—The water in which the leeches are kept should not be changed too often once in six weeks is sufficient unless the water is discoloured by blood. In changing the water avoid having the clean and the old water at different temperatures, and do not touch the leeches with the hands. A few iron nails in the water have been found advantageous, as well as a few plants of valisneria. A recent suggestion is to use a little salicylic acid in the water: ten drops of a 1-in-300 solution is added to each gallon of water. The bottom of the leech-jar should be covered with a mixture of sand and small stones.

B. H. (138/15).—**LITTLE LIVER-TILLS** (No. 10, *C. & D. Diary*).—The formula for these is—

| | | | | |
|------------------|-----|-----|-----|-------------------|
| Aloin. | ... | ... | ... | gr. $\frac{1}{2}$ |
| Podophyllin. | ... | ... | ... | gr. $\frac{1}{2}$ |
| Ext. hyoscy. | ... | ... | ... | gr. $\frac{1}{2}$ |
| Jalapin. | ... | ... | ... | gr. $\frac{1}{2}$ |
| Ext. nuc. vom. | ... | ... | ... | gr. $\frac{1}{2}$ |
| Ol. res. capsici | ... | ... | ... | gr. $\frac{1}{2}$ |
| Ft. pil. j. | | | | |

A. F. (130/71).—We do not know the composition of the proprietary medicine to which you refer.

Westbourne (122/37).—**EUPHRASIA EYE-LOTION.**—An infusion of 1 oz. of *Euphrasia officinalis* in a pint of water or milk is the strength formerly employed. The resulting liquid was used for bathing the eyelids or applied by means of a feather. A distilled water of euphrasia was official in some continental Pharmacopoeias.

F. W. D. (Victoria, B.C.) (132/43).—**STICKY FLY-PAPERS.**—The composition employed for making sticky fly-papers is either Japanese birdlime or the following artificial birdlime:

| | | | |
|--------------------|-----|-----|-------|
| Boiled linseed oil | ... | ... | 6 oz. |
| Gum thus | ... | ... | 1 oz. |
| Castor oil | ... | ... | 2 oz. |

The quantities of the ingredients vary according to the condition of the linseed oil, but the above proportions will be a guide. The composition is spread on parchment-paper and to prevent it running an edging of resin plaster is used. Machines are employed for spreading fly-papers, and have been figured in this journal—one, sold by Messrs. Kay Bros., Ltd., Stockport, in the *C. & D.*, June 4, 1898, p. 926, and another, by Mr. Douglas, Linlithgow, in the *C. & D.*, May 13, 1899, p. 763. An interesting article on the manufacture of fly-papers appeared in the *C. & D.*, July 28, 1906, p. 191. Our contributor used birdlime dissolved in carbon bisulphide.

Glycerin (Bombay) (125/10).—**GLYCERIN TINCTURES.**—The best information on this subject is that given in "Pharmaceutical Formulas." The menstruum there recommended is as follows:

| | | | |
|--------------------|-----|-----|-----------------------|
| Strong acetic acid | ... | ... | 2 $\frac{1}{2}$ parts |
| Glycerin | ... | ... | 25 parts |
| Distilled water to | ... | ... | 100 parts |

The more modern method of preparing alcohol free galenicals is that described in the *C. & D.*, March 28, 1908, p. 489, by Dr. W. H. Martindale. These preparations are called glycertracts, or glycerinates, and full particulars are given of the method of making them in the article referred to and in "Pharmaceutical Formulas," 1908 edition.

P. K. (122/63).—**ETHERGRAM** is a suggested name for a "wireless" telegram.

H. C. R. (125/19).—(1) **HAIR-DYE.**—We have no formula in which an aniline dye is used, and as there seems to be a risk of producing unlooked-for tints we have not recommended aniline dyes. The most modern formulae for hair-dyes are those containing *p*-phenylenediamine, but here, again, some bad cases of irritation have been reported, which makes it difficult to write approvingly of these dyes. It is asserted that the trouble is due to the presence of the Bandrowski base or oxidation-product of *p*-phenylenediamine, and that if the solution is free from precipitate one need have no fear that untoward results would be obtained. (2) The last edition of "Pharmaceutical Formulas" was published in 1908, the volume now containing 1,043 pages.

J. E. L. (126/23).—(1) **OLEUM JECORIS ASELLI IODATUM:**

| | | | |
|--------------------|-----|-----|-------------|
| Iodi | ... | ... | 1 gram |
| Ol. jecoris aselli | ... | ... | 1,000 grams |

Rub the iodine with a little of the cod-liver oil, and then mix with the bulk of the oil. The Swiss Pharmacopœia orders the use of chloroform 2 grains, in which the iodine is dissolved before adding it to the cod-liver oil.

(2) **OLEUM JECORIS ASELLI PHOSPHORATUM:**

| | | | |
|--------------------|-----|-----|-----------|
| Phosphori | ... | ... | 0.1 gram |
| Ol. oliveæ | ... | ... | 10 grams |
| Ol. jecoris aselli | ... | ... | 990 grams |

Gently warm the phosphorus with the olive oil until solution takes place, then add to the cod-liver oil.

(3) **OLEUM JECORIS ASELLI FERRO-IODATUM:**

| | | | |
|------|-----|-----|----------|
| Iodi | ... | ... | 1.7 gram |
|------|-----|-----|----------|

Dissolve in—

| | | | |
|--------------------|-----|-----|-----------|
| Ol. jecoris aselli | ... | ... | 100 grams |
|--------------------|-----|-----|-----------|

and add—

| | | | |
|-----------------|-----|-----|--------|
| Ferri pulverati | ... | ... | 1 gram |
|-----------------|-----|-----|--------|

When all free iodine has disappeared filter and mix with—

| | | | |
|--------------------|-----|-----|-----------|
| Ol. jecoris aselli | ... | ... | 900 grams |
|--------------------|-----|-----|-----------|

J. W. M. (114/23).—The formulæ for insect-sting lotions given in the *C. & D.*, August 14, p. 326, are representative of this class of preparation.

E. E. M. (111/73), writing in reference to POSTAL SAMPLE-BOXES for medicines, says there is room for a comparatively light and inexpensive sample-box with screw stopper, such as is used for sending phials by post, which meet with the approval of the postal authorities. A square wooden block, bored with a circular hole and fitted with a sunk screw top-moulded out of composition, would, our subscriber thinks, meet a demand. The price should not exceed 12s. per gross.

G. H. (Cologne) (111/6).—**TINCTURE-STANDARDS.**—The most complete table of factors regarding the tinctures of the British Pharmacopœia is that published in the *C. & D.*, January 26, 1901, p. 139. This table, compiled by Mr. F. W. Fletcher, gives (1) sp. gr. of spirit used, (2) sp. gr. of tincture, (3) percentage of alcohol by volume in spirit used, (4) percentage of proof spirit by volume in spirit used, (5) percentage of alcohol by volume in tincture, (6) percentage of proof spirit by volume in tincture, and (7) percentage of solid residue dried at 100° C. You could probably obtain a copy of the issue of the *C. & D.* in which this table was given by advertising in the Coloured Supplement.

S. T. P. (120/42).—**SULPHITE PITCH.**—We do not know. Are you possibly referring to sulphite pulp, a very well-known expression in the paper-industry?

Lux (124/28).—**MOTORISTS' LIQUID SOAP.**—A formula for this was given in the *C. & D.*, January 9, p. 68.

J. W. M. B. (138/11).—The cheapest way of quickly reducing the temperature of a large bulk of water would be to add ice. Refrigerating-machinery could be installed if the cooled water is required constantly. Refer to an article on refrigeration which appeared in the *C. & D.*, April 25, 1908, p. 641.

T. A. (135/34).—**Oil of FILMARON** is probably intended for oil of male fern—oleum filicis maris—although "filmaron" is the name given to a principle extracted from male fern.

T. W. E. (137/15).—**ELECTRICAL APPARATUS FOR REMOVING SUPERFLUOUS HAIR.**—This has been described in the *C. & D.* (May 19, 1906, p. 794), and is obtainable from Messrs. S. Maw, Son & Sons.

W. L. (133/45).—**EFFECTS OF INHALING ZINC OXIDE.**—The presence of zinc oxide in quantity in inspired air, like that of any other suspended matter, is apt to set up chronic irritation in the lungs. It is also probable that some of it will be dissolved by the body-juices and get into the blood-stream, in which case it would be likely to have the action of the group of metals to which it belongs pharmacologically (zinc belongs to the same group as lead and copper). It is therefore probable that the sickness and diarrhoea you mention as having occurred in packers of zinc oxide are due to it. Zinc is much milder in its action than lead or copper, but it is conceivable that if the amount ingested were large enough the results would be similar. Colic, diarrhoea, vomiting, headache, and paralysis are well known among lead-workers, and not unknown among workers in copper. It is consequently advisable that the workers should wear efficient respirators.

STRIPPING SALTS as used in laundries.—Can any reader give the composition or any information about this substance?

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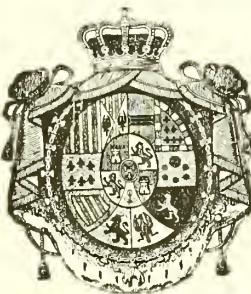
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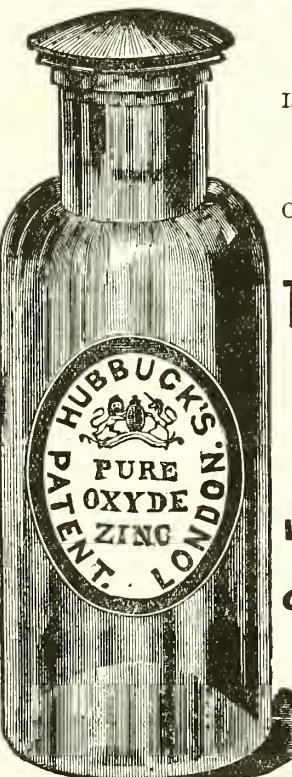
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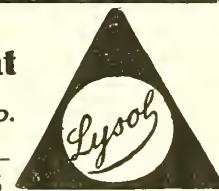
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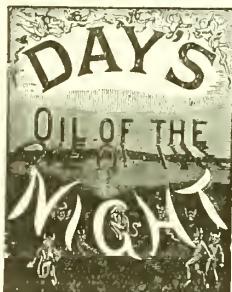
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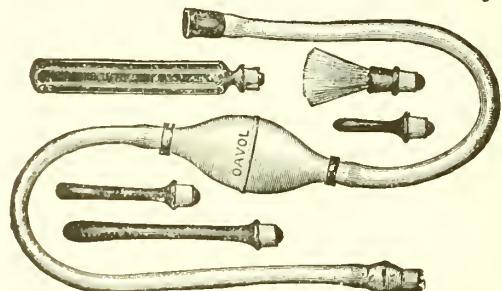
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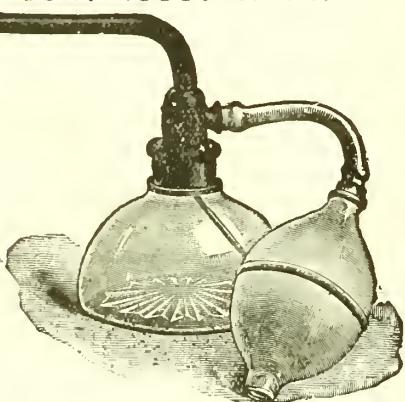
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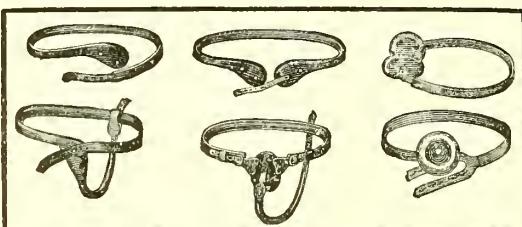
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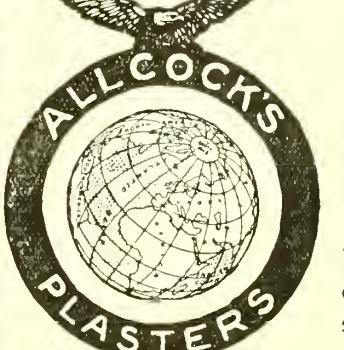
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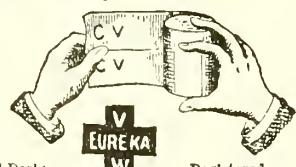
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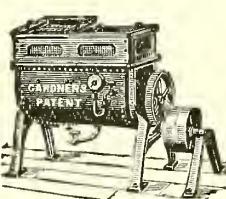
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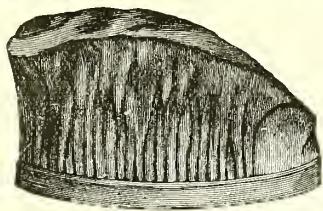


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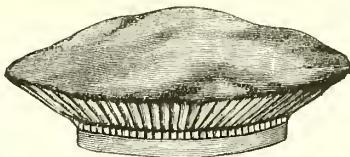
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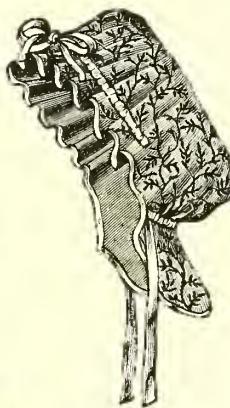


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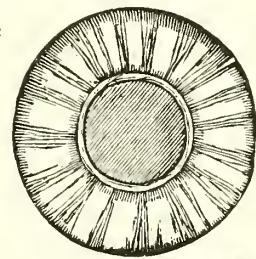
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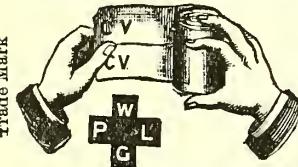
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